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An evaluation of the Amherst ungraded secondary schools conducted with the use of ESEA Title III funds, assessed the degree to which the schools achieved objectives of the program. Descriptive data upon which the evaluation was based include interviews with parents and students and staff, an activities checklist, standardized achievement tests, student records, and case studies. The objectives of the nongraded program emphasized the needs and abilities of the individual student, with progression rates commensurate with ability. In addition, the nongraded curriculum was to provide for independent study and to recognize the value of experiences outside formal study. The program was designed to give the student more responsibility in directing his program of study and to encourage self-motivation. Finally, the program intended to provide a meaningful appraisal of the students' achievement. The data revealed that a father's socioeconomic status greatly influenced a student's curriculum placement and that more direction was needed in helping a student choose his program of study. (LN)

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ANNEX B
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THE AMHERST UNGRADED SECONDARY SCHOOLS:

AN EVALUATION REPORT

VOLUME I

The work presented herein was performed pursuant
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December, 1968

EA 002 497
vol. I

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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We are grateful for the freedom and support given by Superintent of Schools Ronald J. Fitzgerald and Staff during the completion of this two year evaluation study of the Amherst-Pelham Regional Junior and Senior High Schools.

We wish specifically to thank Dr. Leslie E. Dolhenty, project associate for 1966-67, and Mr. Thomas Crowley, project associate for 1967-68; interviewers are Mrs. Norma Gluckstern, Leon Silber, Robert White, Miss Stephanie Griffin, Charles Popken, Nicholas Snoddy, Dennis Gurn. The undergraduate assistants Susan Steele, Donna Cande, Loraine Goodman, Nancy Reid and secretaries Mrs. Linda McPhee, Miss Janice Black, Mrs. Nancy Aldrich, Mrs. Katherine Goodrich and Mrs. Cheryl Comiskey have all given valuable assistance for which we are appreciative. The help of Jack Clinch, programmer, has also been very much appreciated.

In the writing of this final report, we owe much to Thomas Crowley, Charles Popken and typist Mrs. Cheryl Comiskey. Without the help, diligence, and enthusiasm of all the persons who have worked on this project, the careful collection, compilation and analysis of data, this study would not have been successful.

We especially want to express our gratitude to the students, teachers, principals, guidance counselors, school staff and parents for their cooperation.

Ronald H. Fredrickson
Jules M. Zimmer
Lawrence Wightman
Ralph Pippert
December 27, 1968

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CHAPTER I: INTRODUCTION

The excitement about any new undertaking also brings concerned questions regarding the value of the innovation. The ungraded school organization, a comprehensive set of innovations conceived to individualize instruction, has been incorporated into the junior and senior high schools in the Amherst-Pelham Regional School District located in Amherst, Massachusetts. Its value in attaining individualized instruction was the overall purpose of this evaluation study.

In the process of planning, it was noted by the Amherst staff that little empirical evaluation of the ungraded instructional program had been done,[1] and that a limited number of evaluations had been conducted by "outside" research personnel. A team of consultants, associated with the School of Education at the University of Massachusetts, was selected to appraise those aspects of the ungraded approach implemented in the Amherst-Pelham Secondary Schools. This report is a summary of the team's activities at the end of a two year evaluation program (1966-1968).

In terms of the evaluation, an initial tactical decision had to be made concerning whether to conduct a study using external criteria and control schools or whether to use internal criteria and generate descriptive data. In reference to the former alternative, difficulty was noted in empirically delimiting those specific objectives common to the modern, American comprehensive secondary school. The wide differences of opinion among citizens as well as educators concerning the "proper" objectives of the school, the impossibility of controlling sufficient variables in so global a sample and set of treatments, the difficulty in finding a matched school, and the vagueness of overall educational objectives (e.g., worthy home membership, wise use of leisure, etc.) were influential in the decision not to use this approach.

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[1] McLoughlin, William P., The Nongraded School: A Critical Assessment, The University of the State of New York, the State Education Department, September, 1967.

The second alternative--the use of internal criteria to generate descriptive data--was employed in this effort. An attempt was made to assess the degree to which the Amherst-Pelham Regional Junior and Senior High Schools achieved the objectives of the program which they called individualized instruction or ungraded.[2] For this reason, an answer to the question, "Does the ungraded organization better accomplish the objectives of the American Public schools than any other instructional program?" cannot be found in this report.

Carbone (1961) raises six basic questions in identifying an ungraded program.[3]

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[2] Fitzgerald, Ronald J., "An Ungraded High School." Trend, vol. 1, no. 2, 1964-65, p. 2, 3, 23 and Fitzgerald, Ronald J., "The Amherst Program--An Interim Report," Trend, vol. 3, no. 1, 1966-67, p. 1, 2, 14, 15, 18. Trend is published by the Cooperative School Service Center at the School of Education, University of Massachusetts.

1. Do we have clear statements of our instructional objectives organized in a realistic sequence and covering the entire span of our program? (Objectives)

2. Do we have a sufficient variety of instructional materials on different levels of sophistication so that each teacher can adjust instruction to the range of abilities found in each classroom? (Instructional materials)

3. Are we able to move toward greater individualization of instruction so that pupils can actually progress at individual rates? (Individualized instruction)

4. Are we willing to use grouping practices that are flexible enough to allow easy movement from group to group within a class and from class to class within a school? (Grouping practices)

5. Do we have evaluation devices, based on our instructional objectives that will provide clear evidence of pupil attainments and thus facilitate our decisions on grouping and progress? (Evaluation devices)

6. Are we sufficiently committed to that educational shibboleth--recognizing individual differences--to do something about the differences that we have so long only "recognized"? (Human factors)

The objectives of the Amherst school system appear to be in agreement with Carbone's statements.

Ungraded Objectives

The focus of this study was on the objectives as established for the ungraded program. The nine objectives were originated by the school staff and were accepted by the outside evaluation team as the guidelines in generating specific research questions. The nine objectives are as follows:

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[3] Carbone, Robert F., "A Comparison of Graded and Nongraded Elementary Schools," Elementary School Journal, 62(2): p. 82-88, November, 1961.

1. To provide an instructional program that minimizes the requirement for a direct relationship between the chronological age of a student and his placement in a curriculum.
2. To provide an instructional program that establishes the greatest possible relationship between a student's placement in a curriculum and his needs and abilities as an individual.
3. To allow individual students to pursue their studies at rates commensurate with their individual abilities.
4. To provide a curriculum that allows recognition of the values in experiences other than those gained in a formal classroom situation.
5. To provide pupils with the opportunity to pursue independent study programs separate from the study program provided in formal classes.
6. To grant each pupil a major share of the responsibility for directing his own educational program.
7. To encourage each student to develop an inward desire to learn (as opposed to a desire based only on such outside pressures as adult approval, tests, grades, credits, and getting promoted to the next grade or school).
8. To provide each student who is willing to work with an opportunity to succeed (or at least to avoid "failure") in teaching those levels of achievement commensurate with his individual abilities and interests.
9. To provide pupils, parents, prospective employers, college admissions officers and others with a meaningful and realistic appraisal of the achievements of each of the pupils who participates in our instructional program.

Plan of Evaluation

The evaluation procedures and scope were divided into two separate periods. The first year procedures were more nomothetic with semi-structured interviews with every student, teacher, staff member and a sample of parents. Standardized tests, inventories, and checklists were administered to all students. A sample transcript for a high school student who had progressed through the ungraded curriculum was sent to a number of colleges for review as to their observations of phase, weighted grades and nonconventional courses.

The second year of the Amherst Evaluation Project was more ideographic and longitudinal in nature with focus on what is happening to individual students in the classrooms. Year-long case studies were completed on a stratified sample of students with homework and classwork collected to measure differences among phases. Standardized tests were administered according to plan. Two major parts of the second year operation were the evaluation of the courses of study developed for the ungraded program and the utilization of a stepwise multiple regression program to predict final grades in each course.

Unique Aspects

There are several unique aspects of this evaluation study that merit special mention. First, it must be noted that the construction of a new five million dollar junior high school has accompanied curricular, instructional and organizational changes.

Evaluation does not occur without cooperation. The Superintendent of Schools for the Amherst-Pelham Regional School District deserves much credit for inaugurating the evaluation of the ungraded project. However, without the support of faculty, students and parents, evaluation would have been impossible.

Other unique aspects of this evaluation project included a two year time period which enabled continuation of the investigation after the initial Hawthorne effect had passed. As an outside evaluation team, complete procedural and budgetary freedom was provided; there were no subtle pressures and the team was encouraged to be as objective as possible.

Many public schools are ripe for change and innovation but it appears that "few are chosen". The teachers and staff of the Amherst-Pelham Regional School District may develop their schools into one of the "chosen". It is the hope of the evaluation team that this final report will contribute to that development.

CHAPTER II. REVIEW OF THE LITERATURE

The Amherst Ungraded Program: A Preliminary Evaluation Report (1967)* summarized the pertinent literature as follows:

> School curriculum, teacher role, and teacher training must be considered with grouping practices. Various kinds of grouping can probably be used effectively when they are designed to implement planned variations in content and method.
>
> Although the ungraded school has been growing steadily in many parts of the country, there has not been sufficient empirical testing to reach any conclusive results as to whether this plan is any more effective than the graded structure. Much of the literature on the ungraded school consists of descriptive reports based on opinion rather than on controlled research.

Since the completion of the first year's report, several important contributions have been made to the literature. However, the major criticism still exists: empirical evaluation concerning the effectiveness of the non-graded approach is lacking. In fact, Goodlad (1967) has chided American educators for "absorbing the concept without effecting the implied changes." He has cited three reasons for the ineffectiveness of nongraded programs:

1. Bold innovation is lacking because change threatens organizational structure. The non-graded label is preferred to a real non-graded program.
2. It is difficult to implement a non-graded program, as such implementation requires total system change.
3. Few models of non-graded schools exist, either conceptual, simulated, or real.

---

* See Appendix

Goodlad's criticism is more precisely reflected by those who maintain that his conception of nongradedness -- i. e., that a nongraded school "Is designed to implement a theory of continuous student progress." (1960) -- is no longer appropriate, particularly on the secondary level. Brown (1965), for example, rejects the continuous progress notion when he states, "This now modus operandi can no longer be properly called a nongraded school...In its more sophisticated form, the nongraded school has become the Appropriate Placement School."

McCarthy (1967), in writing about an ungraded middle school, maintains that an ungraded approach is one which recognizes that:

1. Each child is different.
2. Each child can benefit from a program built especially for him.
3. Learning is a process involving certain steps which may vary in their complexity and may not follow a fixed pattern.
4. The order in which these steps are taken and the rapidity of movement from one step to another will vary with the individual.

Chittister (1967) expresses the same philosophy in analyzing the nongraded system employed in the Venango Christian High School (Oil City, Pennsylvania). However, she adds the concepts of flexibility, as determined by the individual student's choice, and she amplifies the discussion of multi-phase or levels of choice. Chittister also comments with regard to such techniques as large group lectures, small group seminars, independent research, and testing instruments appropriate for the several phase levels. She points out that the "... student commits himself to achieve at a given depth. There is no academic reason for failure... no reason for mediocrity." Nongradedness, in this context, is not unlike the "contract method" made popular by the Dalton (Massachusetts) schools.

Splawn (1968) also reflects a similar philosophy in writing about Seminole (Texas) High School. He specifies the right of every student to a diploma. Moreover, he places the major responsibility for reaching maximum potential in education in the hands of the student. Splawn cites as evidence in favor of the program preliminary statistics which indicate that there has been a fifty percent reduction in the number of failures.

These philosophical statements are generally in agreement with the position taken by B. Frank Brown of the Melbourne (Florida) High School. However, no two programs can duplicate each other precisely. Lindsey (1967) has stated that, "each school is unique in its pupil population, its staff makeup, its leadership, its location, its resources, its physical features, its patrons, and its conception of acceptable flexibility at a given time. Hence, an exact replication of another system, regardless of the lustre afforded its claims to success, may not be in the best interests of a given community. Lindsey concludes: "The best non-graded program is one that meets the needs of an individual school."

Besvinick and Crittenden (1968), in noting that "the worth of the (nongraded) program has gone unchecked and has rested on the subjective accolades of observers," have attempted to statistically examine the achievement test and attitude inventory scores of Melbourne (Florida) High School students to determine to what extent they differ from a comparable group in another secondary school. Two samples were studied. The first consisted of seniors who had been in continuous attendance at their school for grades ten through twelve. The second sample consisted of 62 pairs of students matched according to socio-economic status, sex and intellectual capacity (i.e., SCAT scores). Because all students in the samples had participated in the Florida Statewide Testing Program, data for the aptitude and achievement measures was readily available. Three additional measures of attitude were administered.

Results were tested for significance using the two sample t-test for the group comprised of seniors in each school and the one sample t-test for the matched pairs sample. An analysis of covariance technique was employed with both samples to equate for variance which might be due to differences in ability when the students entered the tenth grade.

Besvinick and Crittenden concluded, on the basis of pilot study data, that there appeared to be differences between the students at Melbourne and the comparison school and that these differences favored the Melbourne group. However, the use of multiple t-tests and the acceptance of .10 as a minimum level of confidence do not lend credence to the validity of this conclusion.

Unfortunately, the above study is representative of a minority of efforts, those which attempt to experimentally evaluate the programs as established. McLoughlin (1968) points out that of the thirty-three available empirical studies in the literature, 50% are concerned with the influence of nongraded curricular structure on reading achievement, 25% with arithmetic performance, 11% with language skills, and only 9% with total achievement. He concludes, after reviewing this research, that the effect of nongradedness is marginal. He concludes by maintaining that the "nongraded school is defensible only because the graded school is indefensible."

Summary:

1. Experimental research concerning the effectiveness of the nongraded curricular structure on the academic, social and emotional development of children is limited. Of thirty-three studies cited by one reviewer, only three concerned themselves with total achievement skills. Much of the available literature is descriptive.

2. Non-gradedness, as a term which stands by itself, is meaningless. It has come to have too many definitions, several of which are essentially contradictory. The careful examiner of curricular structures will be forced to look beyond external manifestations of a school's organization in order to determine whether or not it adheres to his concept of nongradedness.

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Splawn, Robert E., "Nongraded Enterprise," The Texas Outlook, 52 (January, 1968), 36, 37.

CHAPTER III: STAFF, FACILITIES, AND METHODOLOGY

First Year Staff

Three faculty members at the School of Education, University of Massachusetts, four graduate students, and a secretary comprised the main staff of the evaluation project. One of the graduate students served primarily as the project coordinator, while three were employed as interviewers. All were experienced classroom teachers and one had also been a school administrator. Moreover, three were doctoral students in school guidance and one was working at the masters level.

Staff members are listed alphabetically as follows:

Directors:

Dr. Ronald H. Fredrickson, Assistant Professor
Dr. Ralph R. Pippert, Associate Professor
Dr. Jules M. Zimmer, Assistant Professor

Project Coordinator:

Mr. L. Edward Dolhenty

Interviewers and Research Assistants:

Mrs. Norma Gluckstern
Mr. Leon Silber
Mr. Robert White

First Year Facilities

Office space was provided in the senior high school building. Interviews were conducted in the faculty planning area and in empty classrooms. The CDC 3600 computer at the University of Massachusetts was used for statistical analysis of data. Peripheral data processing equipment at the senior high school and at the University was also used.

First Year--General Procedures

During the summer preceding the academic year under study, procedures for gathering the data were established. Scales, opinionnaires, tests, inventories and other standard devices were examined and evaluated regarding their appropriateness for this study, and the following schedule was set:

Activities Checklist	Grades 7-12	May
California Study Methods Inventory	Grades 7-12	October
Cooperative Foreign Languages	Grades 9-12	May
IOWA Tests of Educational Development	Grades 9-12	May
Learning Atmosphere Inventory	Grades 7-12	October
Metropolitan Achievement Tests	Grades 7-8	May

Initially, a Learning Atmosphere Inventory (LAI), consisting of one hundred items similar in format to the Brown and Holtzman Survey of Study Habits and Attitudes was constructed. Factor analysis after trial administration to 1000 students did not reveal any common items which might be identified as contributing significantly to the learning atmosphere; the LAI will be held in abeyance until further work can be completed. Routine information such as attendance, grades and the like, was taken from school records by duplicating the data processing cards, thereby insuring identical sources of information and eliminating possible errors in transcription.

A semi-structured interview form was developed. Students were randomly assigned to four interview quarters, corresponding to the marking periods in the regular school year. The interviewers were given three weeks of training at the beginning of the year to standardize interview procedures; role playing, direct observation, and tape recordings were among the techniques used. The content of the interview training is briefly outlined in the Appendix. The interview trainer, one of the directors of the study, also observed and critiqued the interviews periodically.

The directors of the evaluation project, with some assistance from the project associate, conducted the teacher and staff interviews. Procedures for these semi-structured interviews had been systematized and each session took about one hour.

Finally, five two and four year colleges were asked to react to the Amherst transcript, unusual in that rank in class is determined by a grade/phase weighting system. Results are reported in Chapter IV.

Second Year Staff

Three faculty members at the School of Education, University of Massachusetts, five graduate students, and a secretary served as the principle staff of the evaluation project. One of the graduate students functioned as project coordinator; three were employed as interviewers and researchers; one served as a statistician. Of the graduate students, three were doctoral students and two were candidates for the masters degree. The interviewers were all trained counselors and one was experienced as a classroom teacher. The coordinator had extensive counseling and teaching experience, and the statistician was employed as a computer programmer at the University.

Staff members, listed alphabetically, are as follows:

Directors:

Dr. Ronald H. Fredrickson, Associate Professor
Dr. Lawrence Wightman, Assistant Professor
Dr. Jules Zimmer, Associate Professor

Project Coordinator:

Mr. Thomas Crowley

Interviewers and Research Assistants:

Miss Stephanie Griffin
Mr. Dennis Gurn
Mr. Charles Popken

Programmer:

Mr. Jack Clinch

Second Year Facilities

Office space was provided in the senior high school building. Interviews were conducted in the faculty planning area. The IBM CD 3600 computer at the University of Massachusetts was used for statistical analysis of data. Peripheral processing equipment at the senior high school and at the University was also used.

Second Year--General Procedures

During the month of September, 1967, two random samples were obtained, stratified according to parental socio-economic classification. Each sample numbered forty-eight (48) students. The first sample was interviewed in depth throughout the school year, following which a case study was written for each student in the sample. The case study was based on information elicited during individual interviews and on information obtained from school records.

The second sample was interviewed on one occasion, and all questionnaires were responded to at that interview. Case studies were not written for the second sample and information elicited was utilized for statistical purposes only.

Interviews were based on questionnaires devised in September, 1967, which offered multiple choice responses to the student. Information elicited via the questionnaires was augmented by information gathered concurrently through counseling interview procedures.

Questionnaires and administration of them to the first sample were scheduled as follows:

01	Parental Data Sheet	October
02	Social Activities	December
03	Social Activities	April
04	Attendance	January, June
05	Warning	Nov., Feb., Apr., (as required)
06	Disciplinary Action	Nov., Feb., Apr., (as required)
07	Classroom Performance (misc)	November
08	Classroom Performance	Nov., Feb., Apr.
09	Grade Cards	Nov., Feb., Apr.
10	Honor Roll	Nov., Feb., Apr.

11	Testing out	(as required)
12	Phase Change/Course Change	(as required)
13	Independent Study	Nov., Feb., Apr., (as required)
14	Next Year's Course Selections	May
15	Homework	Nov., Feb., May, (as required)

The Iowa Tests of Educational Development were administered to tenth year students in May, 1968. Results were stored in the manner described below.

School records were scrutinized for background material. Past academic records, standardized test information and pertinent non-confidential health information were incorporated into the case studies. Interviewers were instructed to become thoroughly familiar with each individual; hence, a variety of informational sources were utilized.

Data Management

Two copies of a master tape are stored at the Research Computing Center at the University of Massachusetts. The information on this tape has been sorted by student number, which implies that all information concerning any student is stored in one place. Students in one class, moreover, are grouped together. Within each block of information, the individual records are in an ordered sequence and missing or non-applicable data are denoted by a blank record. This stratified data format makes the information retrieval program, which selects a sample from the master tape by class, course number, phase or any other meaningful parameter, more efficient. The sample is then written on the drum for input into a second program, which has been designed to process the information statistically.

Among these latter programs are the stepwise multiple regression program, the percentile program, the contingency table program, the I. Q. program and the attendance program. The stepwise multiple regression program selects that "X" variable (see Table 1) among the unused "X" variables which, when added to those already employed, gives the best predictor of "Y".

TABLE 1: Multiple Regression Variables

California Study Methods Survey

1 Attitude toward School
2 Mechanics of Study
3 Planning and System
4 Verification Score

	Grades 7 & 8 Metropolitan Ach. Tests	Grades 9-12 Iowa Tests of Educ. Develop.
6	Word Knowledge	Social Studies Background
7	Reading	Natural Science Background
8	Spelling	Correctness of Expression
9	Language	Quantitative Thinking
10	Language Study Skills	Reading - Social Studies
11	Arithmetic Computation	Reading - Natural Sciences
12	Arithmetic Problem Solv.	Reading - Literature
13	Social Studies Infor.	General Vocabulary
14	Social Studies Study Sk.	Use of Sources
15	Science	Blank

16 Total Absences
17 Total Tardy
18 Total Expelled
19 Total Dismissed
20 Effort
21 Conduct
22-41 Teacher (0 = not in class; 1 = in class)
42 Phase
43 Mark (0 = F; 4 = A)

The percentile program generates percentile rankings for each member of a set of data. The contingency table program produces a two-dimensional contingency table with 20 by 20 limitations and computes row and column totals in addition to the grand total. The program also provides percentages over row and grand totals. The I. Q. program is a special purpose program written to provide standardized "Z" score transformations of the I. Q. scores of students in a particular group. Finally, the attendance program collapses daily attendance data by marking period for each student.

Curriculum Evaluation

The content specialists, chosen to evaluate the courses of study developed in the Amherst-Pelham Regional School District, are listed alphabetically as follows:

Dr. J. Franklin Fitzgerald, Assistant Professor of Mathematics Education, Boston University

Dr. Jim C. Fortune, Associate Director, Bureau of Educational Research and Services, Memphis State University

Dr. Stowell C. Goding, Professor of French, University of Massachusetts

Mr. Ralph Keirstead, Consultant in Science Education, State Department of Education, Connecticut

Dr. William Lauroesch, Bureau of Educational Research, University of Chicago

Dr. J. T. Sandefur, Chairman, Division of Teacher Education, Kansas State Teachers College, Emporia, Kansas

Dr. Claud Thompson, Assistant Professor of Secondary Education, Wisconsin State University, Oshkosh, Wisconsin

All currently available courses of study in English, social studies, mathematics, science and foreign languages, were subject to specific evaluation.

Both junior and senior high school courses were represented, as were all phases, although the latter were not represented in each content area.

Courses of study were to be evaluated with reference to criteria established in the following publications: Summer Curriculum Project; Objectives and Philosophy, Teachers' Guide #2, 1964; and Efficiency in Our School, Teachers' Guide #3, 1965; all by the Amherst-Pelham Regional School District. Also used for criteria was Robert F. Mager's Preparing Instructional Objectives, Fearon Publishers, Palo Alto, California, 1962.

IV. INTERVIEW AND QUESTIONNAIRE RESULTS: FIRST YEAR

Attitudes and opinions have been shown to relate to behavioral outcomes in school achievement. After study, Coleman puts forth the thesis that an "attitudinal set" or "school climate" is a significant contributor to how much and in what ways students learn within a specific school.

Attitude measurement is vulnerable to a number of standard measurement criteria, among them faking, inconsistancy and incompleteness. Published standardized measures of school atmosphere are geared to a broad spectrum of situations rather than to specific institutions or curricular and administrative organizations. While these may have particular value in generalizations of results, the particular purpose of this evaluation is to assess how well the Amherst-Pelham Regional Junior and Senior High Schools have achieved their stated objectives. It is assumed, moreover, that their accomplishment depends to a considerable extent upon the attitude of the participants in the school community -- students, teachers, parents, administrators, guidance personnel, librarians, and curriculum and audio-visual specialists. Some of the outcomes themselves are related to the attitudes of students and school personnel.

The primary method used to gather information on attitude was through a semi-structured interview. Trained interviewers were employed to seek complete and free responses to a series of questions related to the stated objectives. Checks were made during the interview period to insure maintenance of a receptive and open atmosphere.

Validity of the interview depends to a considerable extent upon the relationship established by the interviewer as well as the overall procedure used. It is recognized by the research staff that even when a subject wants to tell the complete truth, he cannot be expected to remove his unconscious defenses or his cherished beliefs regarding his ideals and competencies. However, it is expected that this negative aspect of the interview method was reduced under the favorable conditions provided.

The students, teachers, staff members, and parents appeared relatively free from the expected biases customarily found when using interview techniques. The purpose of the interview was openly discussed with each subject. Each interviewee was told that his comments were confidential and that his specific statements would not be individually identified in the evaluation report. It was explained that the school would benefit to the degree with which the data reported was true and accurate. The interviews were conducted in private and responses were recorded by the interviewers. During the second year's operation of the project, only students included in the sample were interviewed.

It is important to note that more than one response could be given to an interview question. Complete responses were sought and no limitation was made when multiple responses were given. All were recorded and no hierarchial order was assumed. It was initially theorized that subjects, especially the professional staff, might be inclined to only give the "right" response if only one comment was sought.

Student Interviews (First Year)

Semi-structured interviews were held with 1092 of the 1212 students in the junior and senior high schools during the year 1966-1967 (see chart below). The interviews lasted on the average of thirty minutes and gave the interviewer time to seek and to record more complete information. Most of the interviews were conducted on an individual basis during the students' free periods, but because of scheduling problems, some students were seen in small groups (5-15). Finally, the students were randomly divided into four interview periods in order to reduce changes in attitude which might affect selected populations differently throughout the year.

Students Interviewed 1966-1967

	# in Class	# Int'd.	% Class Int'd.
Grade 7	224	160	71.4%
Grade 8	211	211	100%
Grade 9	209	173	82.8%
Grade 10	200	201	100%
Grade 11	183	172	94%
Grade 12	185	175	94.6%
TOTAL	1212	1092	90.1%

Parent Interviews

A stratified sample of parents by year and mean phase of students was drawn from the total junior and senior high school population. All of the sixty-six parents were interviewed by one of the four trained interviewers. The interview was semi-structured with parent responses recorded and subsequently coded by third and fourth parties. Most of the interviews took place in the parents' home and attempts were made to include both mother and father.

The questions used in the interview were taken from the objectives of the ungraded program as stated by the school. Data were to be categorized by year, school, and phase placement of the particular youngster related to the parents.

Mobility and inability to find time when parents could be interviewed were the primary reasons for data not being gathered from the entire sample. However, there does not appear to be any particular phase level or other variable which consistently identified the parents whose interviews were not complete.

Teacher and Staff Interviews

A total of 73 professional staff interviews were completed by the University of Massachusetts faculty investigators. The remaining eight staff members (see chart below) were either involved in areas not directly influenced by the ungraded procedures (Fine Arts, Physical Education) or their interviews were incomplete.

The interview questions were taken from the objectives of the ungraded program. The interviewer sought the teacher's attitude about aspects of the ungraded program and his opinion as to whether certain objectives were being accomplished. The interviewer recorded the responses given to the open-ended questions (see Appendix A) in the subject's own words.

Number of Professional Personnel Interviewed
by Departmental Area

Department	Jr. High		Sr. High		Total	Total Int.
	#	# Int.	#	# Int.		
English	6	6	11	11	17	17
Math	4	4	5	5	9	9
Social Science	4	4	6	6	10	10
Foreign Language	2	2	5.5*	5.5	7.5	7.5
Science	4	3	3	3	7	6
Physical Education	2	1	4	4	6	5
Business Education	0	0	4	4	4	4
Guidance	1	1	3	3	4	4
Industrial Arts	2	2	4	2	6	4
Administration	1	1	1.5*	1.5	2.5	2.5
Fine Arts	3	1	2	1	5	2
Home Economics	1	1	2	1	3	2
TOTAL	30	25	51	47	81	73

* spends half his time as teacher, half as administrator

The interview questions were taken from the objectives of the ungraded program. The interviewer sought the teacher's attitude about aspects of theungraded program and his opinion as to whether certain objectives were being accomplished. The interviewer recorded the responses given to the open-ended questions (see Appendix A) in the subject's own words.

Report of Results

The remaining part of this chapter deals with a description of the results of the data gathered by interviews from students, teachers and parents. Information collected from students by a structured questionnaire is also reported. This questionnaire focused on particular subject areas and provided means of comparing interview data.

Analysis of Interview Data

The organization of the interview data into some meaningful presentations was a major task. An initial categorization of the responses was completed with approximately 50 percent of the interviews finished. The response matrix for each of the open-ended questions was stated as much as possible in the subject's own words. The final student interview form (see Appendix B) which was used by the interviewer has listed, after each question, the major responses given by students up to the middle of the year.

The tabulation of the student responses into the particular categories was made by third parties to eliminate the possibility of interviewer bias. Two persons categorized the responses with a third person assisting when the two could not agree on a classification of a response. Since the value of interviewing lies primarily in being able to explore why a person feels a certain way, the development of consensus statements from such a large number of individual interviewers was no mean task.

Results of the student interview data were analyzed initially by year in school and mean phase level. Teacher responses were trouped according to school, years of teaching experience, and subject area. There did not appear to be marked differences in responses based on experience or subject area. The teacher results are reviewed in this report by junior or senior high school and by subject area only in a few cases.

The remaining part of this chapter is devoted to reporting the interview data as it relates to each objective of the Amherst-Pelham ungraded program.

Objective 1

One of the objectives of the ungraded instructional program in the Amherst-Pelham Regional Junior and Senior High Schools is to minimize the requirement for a direct relationship between the chronological age of a student and his placement within the curriculum.

All teachers in the junior and senior high schools were interviewed. As noted in Table 1, 39 percent of the former and 84 percent of the latter indicated that they taught classes in which there were students of different chronological ages.

TABLE 1: Percentages of Responses of Professional Personnel by School to the Questions:

A. Do you have many classes in which you have students of different chronological ages?
B. Have any problems arisen because of this?

School	Jr. High	Sr. High	Total
A. Number	18	43	61
Response Percentages:			
Yes	39	84	70
No	61	16	30
B. Number	19	44	63
Response Percentages:			
Yes	11	11	11
Yes, maturity level in study of literature		2	2
Yes, if older majority they dominate		5	3
No	26	59	49
No, stimulate each other		2	2
No, keeps seniors from end of year slump		9	2
School still maintains chronological age structure	5		2
Unclassified	58	11	26

Eleven percent of the teachers interviewed stated that problems had arisen because of differences in chronological ages. Difficulties seemed most likely to occur in senior high English classes where the teaching of literature might have been complicated by a varying maturity level. Furthermore, if there were a majority of older students in the class, nine percent of the senior high teachers felt they tended to dominate.

Of those students who responded to the question, "How do you feel about having students younger or older than you in the same classroom?" (Tables 2, 2a), 30 percent answered favorably while 29 percent stated that it made no difference.

TABLE 2: Percentages of Responses of Amherst Secondary Students by School Year to the Question:

How do you feel about having students younger or older than yourself in the same classroom?

School Year	7	8	9	10	11	12	Total
Number	167	219	245	198	180	182	1,191
Response Percentages:							
Like it	32	19	37	37	25	29	30
Like older students only	8	13	6	6	9	5	8
Like older students, better discussions			2	.5	3		.8
Standards set by older students			3	1			.9
Don't like it	21	23	12	9	7	13	14
Not certain, sometimes problems	.6		11	3	2	6	4
Makes no difference	17	9	27	38	48	35	29
Not applicable	19	36	.8	3	3	10	12
Unclassified	2	.9	1	1	2	.6	1

TABLE 2A: Percentages of Responses of Amherst Secondary Students by Mean Phase Placement to the Question:

How do you feel about having students younger or older than you in the same classroom?

Phase	2	3	4	5	Total
Number	29	342	733	87	1,191
Response Percentages:					
Like it	31	29	29	37	30
Like older students only	14	9	8	4	8
Like older students, better discussions		.5	1		.8
Standards set by older students		.5	1		9
Don't like it	24	17	14	3	14
Not sure, sometimes problems		.5	1		9
Makes no difference	10	26	30	30	29
Not applicable	21	13	11	9	12
Unclassified		.9	.9	3	1

A total of 14 percent did not like having students of different ages in the same classroom. Younger students and students in lower phases tended to have more objections than did older students or students in higher phases. Twenty-four percent of phase II, 17 percent of phase III, 14 percent of phase IV, and three percent of phase V students indicated they did not like having students younger or older than themselves in the same classroom. Moreover, 21 percent of students in the seventh, 23 in the eighth, 12 percent in the ninth, nine percent in the tenth, seven percent in the eleventh, and 13 percent in the twelfth year of school answered in this same fashion. Interestingly, the four percent of the students who were not certain how they felt about younger or older students in the same classroom did feel that this situation sometimes caused problems. Finally, eight percent of the students interviewed stated that they liked older but not younger students in the same classroom.

In summary, the majority of the teachers (80 percent) having students of different chronological ages in the same class did not feel that problems had arisen because of this. The majority of the student interviewees either liked having students of different ages in their classes (30 percent) or stated that it made no difference (29 percent). Older students and students in higher phases tended to object less frequently to the presence of younger and/or older classmates.

Objective 2

Flexibility in student placement so as to permit changing phases assumes a high degree of organization. Departmental curriculum committees were established to organize the subject matter into cohesive but independent phase levels.

Responses in Table 3 show that 44 percent of the teachers viewed the committee as being an important determinant of subject matter content.

TABLE 3: Percentages of Responses of Professional Personnel by School to the Question:

What determines the content (subject matter of the course(s)) that you are presently teaching?

School	Jr. High	Sr. High	Total
Number	29	61	90
Response Percentages:			
Department Curriculm Committee	38	47	44
Myself	38	28	31
Textbook	3	13	10
Supervisor	3		1
Unclassified	17	11	13

Whereas senior high school faculty members mentioned these committees more frequently (47 percent as opposed to 38 percent), the other major determinant of content -- "myself" -- was emphasized by junior high teachers (38 percent as opposed to 28 percent). Only one teacher from both schools indicated that his supervisor was instrumental in organizing subject matter. Moreover, three percent of the junior high teachers as compared with 13 percent of the teachers in the senior high school mentioned textbooks as course content determinants.

Analysis of various departments revealed that 55 percent of foreign language instructors in both schools saw themselves as determiners of subject content in their classes, as did those in industrial arts and junior high science. In other departments the indication of factors other than curriculum committee did not seem pronounced.

If it is assumed that the determination of material to be covered in each phase requires organizational consistency, further consideration appears to be in order, particularly in junior high science, in industrial arts and in foreign language classes.

The course materials used in various phases must be considered in conjunction with the abilities and needs of the students. A number of junior and senior high school teachers reported (Table 4) that lower phase students are better able to deal with concrete and "obvious" course materials; higher phases could handle more abstract material at a faster rate. However, many of the responses, particularly of teachers on the junior high school level, were unique and most difficult to categorize.

TABLE 4: Percentages of Responses of Professional Personnel by School to the Question:

How do the students in various phase levels differ in their ability to understand the course material?

School	Jr. High	Sr. High	Total
Number	31	57	88
Response Percentages:			
Lower phases need to be more concrete and obvious	19	33	28
High phases more abstract and theoretical	16	21	19
High phases handle work at faster rate than lower	19	21	20
Unclassified	45	25	32

In considering the question, "Are your homework assignments different depending upon the phase level of the students?" (Table 5), 66 percent of the faculty members indicated that they made some provisions for ability when assigning homework. Responses, however, seemed to focus on the quantity (56 percent) as opposed to the quality (10 percent) of the tasks.

TABLE 5: Percentages of Responses of Professional Personnel by School to the Question:

Are your homework assignments different depending upon the phase level of the student? How different are they?

School	Jr. High	Sr. High	Total
Number	24	62	86
Response Percentages:			
Yes-lower less quality upper more quality	41	63	56
Yes-difference in quality	4	5	5
Yes-lower more specific		6	5
No difference	12	8	9
Unclassified	42	18	24

Of the nine percent who did not differentiate between phases in homework assignments, over half taught either foreign languages or business subjects. Again, however, unclassifiable responses were in evidence.

When faculty members were asked, "Does the nongraded structure allow you to individualize instruction?" 60 percent felt that they were better able to individualize instruction by working with groups in classes of students similar in ability.

TABLE 6: Percentages of Responses of Professional Personnel by School to the Question:

Does the nongraded structure allow you to individualize instruction?

School	Jr. High	Sr. High	Total
Number	25	48	73
Response Percentages:			
Yes, work more with groups in class since similar in ability	52	65	60
No	8	12	11
Depends upon teacher more than structure	16	4	8
Unclassified	24	19	21

Eight percent of those interviewed said that individualized instruction depended more upon the teacher than the structure of the system, while 11 percent indicated that the nongraded structure did not allow them to individualize instruction. Twenty-one percent of the reactions to this question could not be classified.

Because classroom behavior may be an indication of the extent to which an instructional program meets the needs of each individual student, teachers were asked to comment regarding behavior problems. According to Table 7, 41 percent of the teachers said that they had observed no more behavior problems than usual, while 17 percent felt that the ungraded structure had contributed to a reduction in the number of behavior problems. Eleven percent said that they had observed an increase in the number of behavior problems, especially connected with the free pass system. Behavior problems related to phase I and II were not scurrilous but more a reaction of inattention and forgetting of assignments and materials.

TABLE 7: Percentages of Responses of Professional Personnel by School to the Question:

Have you observed any behavior problems in class? What are they?

School	Jr. High	Sr. High	Total
Number	24	46	70
Response Percentages:			
Yes	12	9	10
Yes, increased behavior problems in ungraded	4	15	11
Yes, phase 1, 2 do not interact with each other, hostile, short attention span	8	4	4
Yes, phase 3 hard to motivate		2	1
No, reduced behavior problems in ungraded	17	17	17
No		2	1
No more than usual	42	41	41
Unclassified	12	4	7

When students were asked if they felt that the present school program was meeting their needs (Tables 8 and 8a), 40 percent said that the program met their present interests. There seemed to be somewhat less satisfaction in the lower phases (27 percent in phase II) than in the higher phases (43 percent in phase V). Moreover, younger students were somewhat less satisfied (24 percent in grade seven) than older students (37 percent in grade 12). Most students talked more in terms of college needs than vocational needs. Even eight phase II students mentioned that the school was meeting their college type needs.

TABLE 8: Percentages of Responses of Amherst Secondary Students by School Year to the Question:

How do you feel about the present school program in meeting your needs?

School Year	7	8	9	10	11	12	Total
Number	225	315	283	331	239	277	1,670
Response Percentages:							
Meets my present interest	24	33	58	40	44	37	40
Yes, college	18	22	21	24	20	28	23
Satisfies my parents' concern about my education	14	14	3	9	5	5	8
Yes, vocational	6	3	5	4	4	6	5
No, college			1		.4	2	.5
No, vocational		.3	.7	1	.8	3	.9
Need more courses	7	6	2	5	10	7	6
Too many required courses	6	5	2	6	5	4	5
Change courses listed as majors	6		.3	.9		1	1
More electives for Junior High		.6	.3			.7	.2
No different than any other school's way of meeting them	6	8	1	2	3	3	4
Don't know		.3	3	4	2		1
Unclassified	12	7	2	4	6	3	5

TABLE 8A: Percentage of Responses of Amherst Secondary Students by Mean Phase Placement to the Question:

How do you feel about the present school program in meeting your needs?

Phase	2	3	4	5	Total
Number	33	467	1,036	134	1,670
Response Percentages:					
Meets my present interests	27	39	40	43	40
Yes, college	24	17	24	28	23
Satisfies my parents' concern about my education	15	12	7	6	8
Yes, vocational		7	4		5
No, college		.2	.7		.5
No, vocational		.8	.9	1	.9
Need more courses	6	4	7	7	6
Too many required courses	6	5	4	4	5
Change courses listed as majors		1	1		1
More electives for Junior High		.2	.09	2	.2
No different than any other school's way of meeting them	9	6	3	.7	4
Don't know		.4	2		1
Unclassified	12	6	4	7	5

Since placement in the curriculum may affect an individual's relationships, students were questioned about the social groupings in the school and about their place within the social structure. In describing the groups that "hang around" together, 24 percent of the students interviewed said that the nature of groups depended upon personalities of its members. Data for this question is presented in Tables 9 and 9a. Nineteen percent of the students felt that groups were formed on the basis of such extracurricular interests as athletics, while 18 percent indicated that they were determined by marks and 13 percent by phase placement.

TABLE 9: Percentages of Responses of Amherst Secondary Students by School Year to the Question:

How would you describe the groups that "hang around" together here at school?

School Year	7	8	9	10	11	12	Total
Number	246	342	334	352	241	310	1,825
Response Percentages:							
Depends on personalities-how they get along with others	38	34	10	22	19	23	24
Depends upon interests, hobbies, etc.	17	14	18	20	22	24	19
Depends upon grades	13	16	23	18	22	19	18
Most friends are same phase	14	12	11	13	13	14	13
Hoods want to go against things most stand for	8	10	16	7	5	5	9
Phase 3 and 4 have friends in all phases but highest and lowest phases do not	6	8	.9	5	4	5	5
Snobs and non-snobs		3	8	2	3	1	3
Neighborhood friends	4	1	2	.9	3	2	1
Depends upon father's occupation		.3	.9	.6	.4	2	.7
Depends upon vocational goals				.9	.8	1	.5
Boys and girls			1	.6			.4
Do not understand social groups		.3	.9	.9	.4		.4
By age			.3		.4	.3	.2
Unclassified	3	1	7	8	7	5	5

Five percent of the students said that phase III and IV students have friends in all phases but that students in the highest and lowest phases stay more within their respective groups.

TABLE 9A: Percentages of Responses of Amherst Secondary Students by Mean Phase Placement to the Question:

How would you describe the groups that "hang around" together here at school?

Phase	2	3	4	5	Total
Number	39	546	1,100	140	1,825
Response Percentages:					
Depends on personalities-how they get along with others	26	24	24	21	24
Depends upon interests, hobbies, etc.	15	20	19	21	19
Depends upon grades	28	17	19	18	18
Most friends are same phase	10	12	13	12	13
Hoods want to go against things most stand for	5	9	9	4	9
Phase 3 and 4 have friends in all phases but highest and lowest phases do not	5	4	5	6	5
Snobs and non-snobs		4	3	3	3
Neighborhood friends	3	2	1	3	1
Depends upon father's occupation		.7	.6	.7	.7
Depends upon vocational goals		.2	.4	3	.5
Boys and girls		.4	.4	.7	.4
Do not understand social groups		1	.2		.4
By age		.2	.1	.7	.2
Unclassified	8	5	5	7	5

When students were asked, "What does it take to be accepted as a member of the group?", (Tables 10 and 10a), six percent considered placement in phase important for acceptance. This was somewhat less than the 13 percent who alluded to the importance of phasing as reported in Table 9. The factor which the students (44 percent) seemed to perceive as most important was how well an individual gets along with others. This broad factor seemed to focus on personality variables and general friendliness. Seventeen percent said that "going along with the things the group does" was important, while seven percent mentioned interests and six percent athletics. Neighborhoods do not appear to be strong determinants of friendships.

TABLE 10: Percentages of Responses of Amherst Secondary Students by School Year to the Question:

What does it take to be accepted as a member of the group?

School Year	7	8	9	10	11	12	Total
Number	227	298	290	301	227	261	1,604
Response Percentages:							
How well you get along with people	55	43	45	43	40	40	44
By going along with the things they do	21	24	14	14	18	12	17
Depends upon interests	.9	2	10	6	12	10	7
Depends upon participation in athletics	6	7	9	6	3	7	6
Have to be in same phase with them	4	8	5	6	6	3	6
Depends upon participation in school clubs	3	4	2	7	2	6	4
Depends on where you live	4	4	2	4	.9	4	3
Father employed at University or College	.9	3	.3	2	.4	4	2
Dress	2		5	2	2	2	2
Make good grades			.7	1	6	1	1
Family has money		.3	1	.3	.9	1	.6
Depends upon being in a certain location because of lunch break, etc.		.3	1			1	.4
Being a "big spender"			1	.7			.3
Unclassified	4	3	4	8	9	8	6

TABLE 10A: Percentages of Responses of Amherst Secondary Students by Mean Phase Placement to the Question:

What does it take to be accepted as a member of the group?

Phase	2	3	4	5	Total
Number	33	424	1,020	127	1,604
Response Percentages:					
How well you get along with people	36	44	45	39	44
By going along with the things they do	33	17	17	14	17
Depends upon interests	3	5	7	15	7
Depends upon participation in athletics	9	6	7	3	6
Have to be in same phase with them	3	6	5	8	6
Depends upon participation in school clubs		4	5	1	4
Depends on where you live	3	3	3	2	3
Father employed at University or College	3	2	2		2
Dress		2	2	4	2
Make good grades		1	1	1	1
Family has money		.9	.6		.6
Depends upon being in a certain location because of lunch break, etc.		.5	.4	.8	.4
Being a "big spender"		.6		.8	.3
Unclassified	3	6	5	9	6

With the exception of eleventh and twelfth year phase V individuals, who more often perceived themselves associating socially within their own phase, students (34 percent) generally saw themselves as being members of the middle groups (Tables 11 and 11a). Twenty-three percent of the students said that their friends were equally divided in all phases, ten percent saw themselves as being part of the social-athletic group and nine percent said that their social group consisted of neighborhood friends. Finally, six percent said they did not belong in any social group, and four percent said they were "hoods" or "mods."

TABLE 11: Percentages of Responses of Amherst Secondary Students by School Year to the Question:

Where do you fit in the social groupings here at school?

School Year	7	8	9	10	11	12	Total
Number	215	260	232	252	201	236	1,396
Response Percentages:							
Average-Middle group	29	36	47	29	28	33	34
Friends equally divided in all phases	33	31	9	23	20	22	23
Athletes	11	12	6	8	9	13	10
Neighborhood friends	16	9	5	10	7	8	9
With own phases	5	6	8	11	14	5	8
No groups	1	1	12	6	8	7	6
Hoods	2	3	1	.8	1	4	2
Mod group	.5		4	2	1	1	2
Unclassified	1	.8	6	11	9	6	6

TABLE 11A: Percentages of Responses of Amherst Secondary Students by Mean Phase Placement to the Question:

Where do you fit in the social groupings here at school?

Phase	2	3	4	5	Total
Number	33	409	854	100	1,396
Response Percentages:					
Average-Middle group	30	41	32	19	34
Friends equally divided in all phases	24	20	25	17	23
Athletes	15	9	11	7	10
Neighborhood friends	9	11	9	5	9
With own phases	6	4	8	24	8
No groups	3	6	6	9	6
Hoods	3	4	2	1	2
Mod group		.5	2	6	2
Unclassified	9	5	5	12	6

When students were asked what they thought of the whole idea of phasing (Tables 12 and 12a), 14 percent reacted unfavorably or maintained that phasing made no difference. Younger students and students in lower phases tended to react more frequently in this manner. It is interesting to note that a variety of reasons were cited by these pupils.

TABLE 12: Percentages of Responses of Amherst Secondary Students by School Year to the Question:

What do you think of this whole idea of phasing?

School Year	7	8	9	10	11	12	Total
Number	255	347	304	383	262	281	1,832
Response Percentages:							
Allows me to work at own level--others too fast or slow	53	48	56	39	39	42	46
Enjoy phasing more than traditional method	24	24	23	35	29	26	27
Like more freedom to go to different places to study	11	14	3	12	8	12	10
Don't like it	4	6	4	3	4	4	4
Don't like it because the way grades are compared	2	3	3	4	6	6	4
Inconsistent difference between same phases			2	2	2	1	1
Don't like it--lost friends	2	2		.5	.8	.3	.9
Encourages social stratification			3	.5	1	.7	.9
Too much responsibility to select phase			1	1	1	.3	.7
Don't like different phases in same room			2	.8	.4	.3	.6
Too much pressure on upper phases	.4		.3	.3	1	.7	.4
Too difficult to change phase because of scheduling			1		.4		.2
I don't care--makes no difference	1	2	2	2	4	4	2
Unclassified	2	.3	1	1	3	2	2

TABLE 12A: Percentages of Responses of Amherst Secondary Students by Mean Phase Placement to the Question:

What do you think of this whole idea of phasing?

Phase	2	3	4	5	Total
Number	46	483	1,156	147	1,832
Response Percentages:					
Allows me to work at own level	39	45	47	42	46
Enjoy phasing more than traditional method	22	28	26	31	27
Like more freedom to go to different places to study	17	11	10	10	10
Don't like it	9	7	3	1	4
Don't like it because the way grades compared	4	3	4	4	4
Inconsistent difference between same phases			2	.7	1
Don't like it--lost friends		1	.7	1	.9
Encourages social stratification		.6	.9	2	.9
Too much responsibility to select phases		.2	1		.7
Don't like different phases in same room		.6	.7		.6
Too much pressure on upper phases			.4	2	.4
Too difficult to change phase because of scheduling		.2	.2		.2
I don't care--makes no difference	7	3	2	2	2
Unclassified	2	.2	2	3	2

Twenty-seven percent of the students said that they enjoyed phasing more than the traditional method and 46 percent said that phasing allowed them to work at their own level. Moreover, ten percent also enjoyed the freedom connected with going to different places to study. More lower phase than upper phase students mentioned this last factor.

It appears that especially for students in the upper phases in the last two years of school, the ungraded program has been instrumental in meeting individual needs. Students responded favorably to phasing and did not report phasing as a major determinant of who their friends were. Increased behavior problems noted by 11 percent of the teachers seemed to relate more to the pass system than to the ungraded organization and curriculum.

Objective 3

In an attempt to assess whether individual students were allowed to pursue their studies at rates commensurate with their abilities, teachers and students were asked to respond to a number of questions which implied negative influences on individual progress according to one's own scholastic ability. The teachers were asked "What do you think is the student attitude towards lower phase students (phases I and II)?" The responses, recorded in Table 13, indicate that 50 percent of the Junior High School teachers and 29 percent of those in the Senior High School could not sense any particular attitude differentiating lower phase students.

However, 37 percent of the faculty felt that students tended to look down on the lower phases, an attitude noted with greater frequency as students moved into Senior High School. The percentage of students who were perceived as feeling sorry for lower phase pupils also increased from junior high school to senior high school. In addition, seven percent of the teachers indicated that differences existed between "town and gown" -- between community and academically oriented people -- which might indicate differences in feelings among upper and lower phase students. Hence, a total of

50 percent of the faculty sensed negative attitudes toward lower phased students.

TABLE 13: Percentages of Responses of Professional Personnel by School to the Question:

What do you think is the student attitude towards lower phase students (1 and 2)?

School	Jr. High	Sr. High	Total
Number	26	56	82
Response Percentages:			
Look down on lower phases	27	41	37
Lower phases want to do same thing as higher phases	8	7	7
See no particular attitude	50	29	35
Differences between "town and gown"	4	9	7
Feel sorry for them	4	7	6
Unclassified	8	7	7

Data in Table 14 concern the question, "What do you think is the student attitude towards upper phase students?"

TABLE 14: Percentages of Responses of Professional Personnel by School to the Question:

What do you think is the student attitude towards upper phase students (4 and 5)?

School	Jr. High	Sr. High	Total
Number	23	42	65
Response Percentages:			
Admire them	26	40	35
Do not look down or up at them	22	17	18
Upper phases want to be unique	13		5
See them as odd		7	5
Unclassified	39	36	37

Thirty-five percent of the teachers sensed an attitude of admiration toward upper phase students, while five percent felt that students saw them as odd. However, 37 percent of the teachers made such varied responses that they could not be categorized.

Students were asked to comment on teacher attitudes toward various phases (Tables 15 and 15a).

TABLE 15: Percentages of Responses of Amherst Secondary Students by School Year to the Question:

How do you think the teachers feel about the upper phased students as compared with the lower phased students?

School Year	7	8	9	10	11	12	Total
Number	243	319	296	285	229	251	1,623
Response Percentages:							
Depends on teacher	32	33	7	24	16	27	23
No difference	8	11	33	10	14	15	15
Expect more work in the upper phases	33	26	20	27	24	27	26
They like upper phases better	7	12	15	17	23	16	15
Respect higher phases		.6	6	5	9	3	4
Allow more student freedom in upper phases		.6	3	3	2	.8	2
They like lower phases better	.8		.7				.2
Willing to spend more time with lower	18	15	13	8	8	8	12
Look down on lower		.3	1	2		1	.9
Unclassified	.8	.6	1	5	3	1	2

Twenty-three percent of the students thought that attitudes toward students of different phases would vary according to the teacher; 15 percent sensed no difference in teacher attitude. On the other hand, 26 percent of the stu-

TABLE 15A: Percentages of Responses of Amherst Secondary Students by Mean Phase Placement to the Question:

How do you think the teachers feel about the upper phased students as compared with the lower phased students?

Phase	2	3	4	5	Total
Number	40	449	1,016	118	1,623
Response Percentages:					
Depends on teacher	30	24	22	25	23
No difference	15	19	15	7	15
Expect more work in upper phases	23	22	27	32	26
They like upper phases better	8	12	16	22	15
Respect higher phased students		3	4	3	4
Allow more student freedom in upper phases	3	.7	1	4	2
They like lower phases better	3	.2	.2		.2
Willing to spend more time with lower	20	15	11	6	12
Look down on lower phases		1	.9		.9
Unclassified		2	2		2

dents indicated that teachers expected more work in upper phases and 21 percent felt that teachers liked or respected upper phases more or gave them greater freedom. In contrast, less than one percent of the students indicated that they felt that the lower phases were liked better, although 12 percent of the students felt that teachers were willing to spend more time with lower phases. A greater number of students responding in this manner were in the lower phases.

An attempt was made to assess the extent to which students recognized differences in rates of educational progress and the factors which seemed to relate to this phenomenon. Student responses are reported in Tables 16 and 16a.

TABLE 16: Percentages of Responses of Amherst Secondary Students by School Year to the Question:

Do you think that you work harder for some teachers and not others? Explain.

School Year	7	8	9	10	11	12	Total
A. Number	160	216	236	193	162	178	1,145
Response Percentages:							
Yes	37	38	38	35	39	41	87
No	3	2	2	4	3	2	6
No difference	3	3	5	2	.8	1	6
B. Number	212	285	296	276	212	218	1,499
Response Percentages:							
Only if enjoyed subject	19	20	22	17	16	14	32
Worked harder in spite of teacher	11	7	2	3	2	1	8
Only if in trouble with grades	6	3	3	3	4	3	7
If career choice relevant to subject	7	9	1	6	4	9	10
If I liked teacher personally	13	16	17	19	16	19	29
If required by teacher	.3		.6	1	2	.7	1
If teacher clear on expectations		.4	3	.6	1	3	3
Depends on teacher presentation	.3	1	4	8	6	4	7
I'm lazy and not consistent			.7	.2	1		.7
If subject difficult					1		.3
Unclassified	.5	.6	.4	.2	2	1	1

TABLE 16A: Percentages of Responses of Amherst Secondary Students by Mean Phase Placement to the Question:

Do you think that you work harder for some teachers and not others? Explain.

Phase	2	3	4	5	Total
A. Number	28	329	702	86	1.145
Response Percentages:					
Yes	36	39	38	36	87
No	3	3	2	4	6
No difference	3	4	2	.5	6
B. Number	39	391	941	128	1,497
Response Percentages:					
Only if enjoyed subject	21	21	17	16	32
Worked harder in spite of teacher	10	4	4	3	8
Only if in trouble with grades	4	4	4	4	7
If career choice relevant to subject	9	5	6	6	10
If I liked teacher personally	13	16	17	19	29
If required by teacher		.1	.6	4	1
If teacher clear on expectations		.4	2	4	3
Depends on teacher presentation		3	5	4	7
I'm lazy and not consistent		.1	.5		.7
If subject difficult		.1	.2		.3
Unclassified		.1	1	.5	1

Eighty-seven percent of the students said that they worked harder for some teachers than others. In addition, 31 percent said that they worked harder if they enjoyed the subject matter, and 29 percent said that they worked harder if they liked the teacher personally. Other reasons for working harder for some teachers than others included: trouble with grades (seven percent), career choice relevance to the subject (10 percent), teacher presentation (seven percent), and teacher expectations (three percent).

Teachers were questioned with regard to their attitude towards a student's request for a change of phase. Responses seem to indicate that teachers feel that student change of phasing should be considered seriously by the teacher as well as the student.

As can be seen in Table 17, 33 percent of the teachers evaluated the request on the basis of the student's performance and his chance for success in the other phase. Twenty-four percent questioned the student's reason for requesting a change. Only nine percent of the teachers stated that they went along with the student's wishes without question.

TABLE 17: Percentages of Responses of Professional Personnel by School to the Question:

What do you do if a student requests a change of phasing?

School	Jr. High	Sr. High	Total
Number	32	59	91
Response Percentages:			
Question about reason	22	25	24
Advise as I see his performance and chance of success	28	35	33
Wonder about student's ability to decide changing phase		3	2
Give special work	6	2	3
Sign transfer form, go along with student's wishes	3	12	9
Unclassified	41	22	28

Students were also asked to comment on phase changes. Their responses are reported in Tables 18 and 18a.

TABLE 18: Percentages of Responses of Amherst Secondary Students by School Year to the Question:

Why do you think students up or down phase?

School Year	7	8	9	10	11	12	Total
Number	305	380	387	419	320	381	2,192
Response Percentages:							
Depends upon whether like subject or not	9	9	.9	5	4	8	7
Depends upon who teacher is	11	9	3	12	12	13	12
Depends upon grades received in subject	38	30	3	22	18	22	24
Depends where most friends are located	4	4	1	7	6	6	5
Depends upon career choice	3	5	.5	6	5	7	5
More prestige in upper phases	2	6	.7	6	8	6	5
Work too hard or easy	31	35	11	35	41	33	38
Down phase to allow more time to concentrate in other areas	.3		.06		.6	.8	.3
Lazy	.3	1	1	3	3	2	2
Conflict of schedule		.3	.06			.3	.1
Depends upon certain phases in specific subjects			.06	.2			.09
When teachers tell them		1	.3	1	2	.3	.9
Unclassified	.6		.06	1	2	.5	.8

Thirty-eight percent of the students based their reason for change on the ease or difficulty of the work, and 24 percent said that it depended upon grades received in the subject. A number of students based their reason

TABLE 18A: Percentages of Responses of Amherst Secondary Students by Mean Phase Placement to the Question:

Why do you think students up or down phase?

Phase	2	3	4	5	Total
Number	46	570	1,382	194	2,192
Response Percentages:					
Depends upon whether they like subject or not	13	6	6	6	7
Depends upon who teacher is	15	9	12	15	12
Depends upon grades received in subject	30	25	23	20	24
Depends upon where most friends are	4	6	5	6	5
Depends upon career choice	9	4	5	5	5
More prestige in upper phases	7	4	5	6	5
Work too hard or too easy	17	41	38	34	38
Down phase to allow more time to concentrate in other areas			.4	.5	.3
Lazy	2	2	2	4	2
Conflict of schedule			.1	.5	.1
Depends upon certain phases in specific subjects		.2	.07		.09
When teachers tell them	2	.7	.7	2	.9
Unclassified		.4	.9	1	.8

for up or down phasing on the teacher (12 percent), on subject matter (seven percent), on peer influence (five percent), and on career choice (five percent). An analysis of these replies would seem to indicate that most students (62 percent) consider their ability to cope with a subject when requesting to up or down phase.

Hence, although students seemed to admire the upper phases as well as to see the work as being more demanding, and although they ap

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parently considered to some degree the personality of the teacher in choosing subject matter areas, both teachers and students seem to agree that students' abilities are primarily the bases for selecting their studies.

Objective 4

In an attempt to ascertain whether the curriculum allows recognition of the value of experiences other than those gained in a formal classroom, teachers were asked if there were opportunities for students in all phases to participate in extracurricular activities. In view of the teachers' opportunity for observation, this source of information seems most important. Their answers to the questions are reported in Table 19.

TABLE 19: Percentages of Responses of Professional Personnel by School to the Question:

Is there opportunity for students in all phases to participate in extracurricular activities?

School	Jr. High	Sr. High	Total
Number	25	47	72
Response Percentages:			
Yes	56	81	72
No	20	17	18
Unclassified	24	2	8

Eighty-one percent of the teachers in the high school and 56 percent of those in the junior high school indicated that there was an opportunity for all the students to participate in extracurricular activities. It would appear that the senior high school offers more opportunity for the individual student to gain experiences outside of the formal classroom situation.

However, the large unclassified category in the junior high school leads one to hesitate with regard to this conclusion.

Objective 5

Since the library is one of the major tools for independent study -- separate from the programs and assignments of regular classes -- students were asked to evaluate the library and its facilities. Thirty-two percent of the students interviewed said that they liked the library and its facilities. Student replies, shown in Table 20, reveal a somewhat larger percentage of senior high school students who said they liked the library than junior high students. Four percent of the students said the library was poor. Twelve percent of the students felt that the library had shortcomings but that it was as good as could be expected for a public high school. The greatest percentage of students responding in this fashion were in phases IV and V (Table 20a).

A greater percentage of phase V students were among those who said that they used other libraries. Whereas students in the twelfth year seemed more likely to be among the five percent who did not use the library, phase II students indicated more often than others that they used the library only for studying, while a greater percentage of phase V students indicated that they used the library for other purposes.

The faults of the library most often mentioned by the students were: not enough books (nine percent), too noisey (six percent), and not enough back issues of periodicals (three percent). The need for another conference room, more teaching machines, and too crowded conditions were also

TABLE 20: Percentages of Responses of Amherst Secondary Students by School Year to the Question:

What do you think of the library and its facilities?

School Year	7	8	9	10	11	12	Total
Number	291	397	314	339	247	290	1,878
Response Percentages:							
Good, I like it	20	17	53	37	40	28	32
Shortcomings but as good as can be expected for a public high school	13	13	8	14	10	12	12
The librarian is good	11	8	5	8	11	10	9
Not enough books	11	12	7	9	9	8	9
Use only for studying	13	16	6	7	6	5	9
Use other libraries	5	7	3	8	4	8	6
Too noisey	7	6	3	6	6	11	6
Don't use it	4	2	4	3	3	13	5
A poor library	8	5	3	1	2	2	4
Not enough back issues of periodicals	4	5	.9	3	3	1	3
Need separate reference section	1	2	2	2	2	1	2
Need more pleasure reading matter	.3	.5	.9		2	.7	.6
Need another conference room			1	.6		.4	.4
Too crowded		.2	.9	.3	.8	.4	.4
Need more teaching machines	.3	.2	.3				.1
Unclassified	2	5	.3	1	.8	1	2

mentioned by some students.

Although a variety of responses were given in response to the question, it would seem that in general students use the library, feel the librarian is doing a good job, and are satisfied with its facilities. Upper phase students appear to make greater use of the library but also indicate somewhat less satisfaction with its facilities than did lower phase students.

TABLE 20A: Percentages of Responses of Amherst Secondary Students by Mean Phase Placement to the Question:

What do you think of the library and its facilities?

Phase	2	3	4	5	Total
Number	42	491	1,197	148	1,878
Response Percentages:					
Good, I like it	31	36	30	28	32
Shortcomings but as good as can be expected for a public high school	7	9	12	18	12
The librarian is good	17	9	8	9	9
Not enough books	2	8	10	12	9
Use only for studying	10	8	10	4	9
Use other libraries	2	4	6	8	6
Too noisey	7	6	6	6	6
Don't use it	5	5	5	2	5
A poor library	10	4	3	3	4
Not enough back issues of periodicals	5	3	3	3	3
Need separate reference section		2	2	1	2
Need more pleasure reading matter		.6	.6	1	.6
Need another conference room		.8	.3		.4
Too crowded		.2	.4	1	.4
Need more teaching machines		.2	.2		.1
Unclassified	5	2	2	2	2

It would also appear that teachers are generally satisfied with library and library research facilities. Teachers were asked if they found the library and other material resources readily available to them and to their students during non-school hours. As reported in Table 21, 75 percent answered affirmatively and three percent commented that there had been improvement. Seven percent were not satisfied with library facilities.

TABLE 21: Percentages of Responses of Professional Personnel by School to the Question:

Have you found the library and other material resources readily available to you and your students during non-school hours?

School	Jr. High	Sr. High	Total
Number	24	48	72
Response Percentages:			
Yes	75	75	75
No	8	6	7
Getting better		4	3
Unclassified	17	15	15

TABLE 21A: Percentages of Responses of Professional Personnel by School to the Question:

What responsibility does each student bear in selecting his own educational program?

School	Jr. High	Sr. High	Total
Number	26	54	80
Response Percentages:			
They have final responsibility	19	37	31
Depends upon parents	11	9	10
Final responsibility-good idea		5	4
Upper phases have more responsibility	4	2	3
They don't have final responsibility	35	9	18
Too much responsibility		15	10
Need more guidance	8	11	10
Organize time for teachers to guide students-counseling day		4	3
Unclassified	23	7	13

Objective 6

Each pupil was to have a major share of the responsibility for directing his own educational program. Teachers were asked what responsibility they perceived each student had in selecting his own educational program. Their responses are recorded in Table 21a. Thirty-one percent of the teachers felt that the student did have the final responsibility for selecting his educational program; four percent, moreover, indicated that student responsibility was a good idea. Part of the difference between responses of junior and senior high teachers relates to the fact that incoming seventh graders have no choice -- they are placed by sixth grade teachers. To a lesser extent, eighth graders are placed in phase by teachers.

Eighteen percent of the teachers interviewed did not think that the student had final responsibility to choose their program. Some 10 percent of the teachers thought that the amount of responsibility the student had depended upon his parents. In analysis of subject areas, a majority of the senior high English and social studies instructors said that students had too much responsibility or that they needed more guidance.

In comparison, ten percent of all teachers interviewed felt that the student had too much responsibility and 10 percent suggested that the students have more guidance in choosing educational programs.

When teachers were asked why students moved up in phase (Table 22), 24 percent said that it was because of friends in higher phases and 18 percent thought that the students were persuaded by their parents. Nine percent of the teachers indicated that individuals moved up because they did not want to be with slower students, and nine percent thought students moved up because they had been urged by teachers.

TABLE 22: Percentages of Responses of Professional Personnel by School to the Question:

Why do you think the students move up in phase?

School	Jr. High	Sr. High	Total
Number	46	90	136
Response Percentages:			
Friends in higher places	17	28	24
Pressure from parents	13	20	18
Too bored	20	15	17
Don't want to be with slower students	2	13	9
Urged by teacher	11	8	9
When getting A's in lower phases	11	3	6
Become more motivated	7	3	4
To have a certain teacher		1	.7
Unclassified	15	5	9

On the other hand, seventeen percent thought that students moved up in their phases because they were bored and six percent because they received A's in lower phases. Three percent felt that the students who moved up had been placed incorrectly to begin with.

Thirty-six percent of the teachers interviewed thought that students moved down in phase (Table 23) because the work was too fast for them; 15 percent said that students moved down in response to the urging of the instructor.

TABLE 23: Percentages of Responses of Professional Personnel by School to the Question:

Why do you think the students move down in phase?

School	Jr. High	Sr. High	Total
Number	36	67	103
Response Percentages:			
Work too fast	47	30	36
Want to take it easy	19	21	20
Urged by teacher	8	18	15
Friends in lower phases	5	4	5
Not to have a certain teacher	3		.9
Unclassified	14	13	13

Twenty percent of the teachers thought that students moved down in order to "take it easy," and five percent said students moved because of friends in lower phases. Ten percent said that students moved down in phase because they wanted the security of high grades.

Basically, teachers indicated that students are more likely to move up than down to be with friends. A slightly larger percent thought that students moved down rather than up because of teachers. Parents, according to the teachers' experience, provide negligible influence on down phasing, while 18 percent thought they encouraged students to move up.

Parents were asked who they thought was the biggest help in school when their child selected a phase (Table 24). Thirty-eight percent said that guidance counselors were the greatest help, 24 percent thought that teachers were the greatest help, and 24 percent indicated that the child himself was most responsible for selecting a phase. It appears that parents see the counselors and teachers playing a significant role in phased selection.

TABLE 24: Percentages of Responses of Parents by Mean Phase Placement to the Question:

Who do you think is the biggest help in school when your son or daughter selects a phase?

Phase	3	4	5	Total
Number	19	54	11	84
Response Percentages:				
Guidance Counselors	47	35	36	38
Self	16	38	18	24
Teachers	11	26	36	24
Don't know	21	2		6
Parents		7		5
Friends		2	9	2
Tests	5			1

Students were asked what they would do to make phasing more effective. The wide variety of responses are reported in Tables 25 and 25a. Twenty percent said that they would make no changes because they liked phasing the way it was. Fourteen percent of the students felt that the differences in phases were primarily in the marks rather than the work, and wanted a change in this situation. Five percent indicated that there was a need for more phases, especially in the middle phase, and four percent suggested reduced difficulty in down phasing. It is interesting to note that while three percent said that too much responsibility was placed on the student in phase selection, no one mentioned a desire for increased responsibility. Seven percent of the students thought that coverage of the same sub-

TABLE 25: Percentages of Responses of Amherst Secondary Students by School Year to the Question:

What would you do to make phasing more effective?

School Year	7	8	9	10	11	12	Total
Number	287	356	246	305	235	260	1,689
Response Percentages:							
No change--good as is	13	14	46	19	19	14	20
Make differences in work, not just marks	8	18	5	13	11	19	14
Separate phases into different classrooms	8	7	13	12	12	19	11
Try to change certain teachers	13	14	5	11	8	9	10
Some phase teachers not covering same material in same subject	9	8	2	6	9	8	7
More independent work			.8	.3	.8	.4	.3
Offer more courses in curriculum, esp. vocational or practical type	7	6	.4	6	3	7	5
Reduce required courses	4	5	1	5	3	4	4
More audit courses--grades not averaged in class rank				.3			.06
Add more phases	8	6	5	3	5	.8	5
Reduce difficulty in down phasing	4	6	6	4	3	3	4
Too much responsibility placed on student	3	3	2	5	6	1	3
Teachers should decide more on phase	1	.3	4	2	4	1	2
Put phase no. in honor roll			.4	.3		.4	.2
Drop it--go back to traditional	3	4	3	2	4	3	3
Unclassified	3	8	7	11	14	10	9

TABLE 25A: Percentages of Responses of Amherst Secondary Students by Mean Phase Placement to the Question:

What would you do to make phasing more effective?

Phase	2	3	4	5	Total
Number	38	472	1,049	130	1,689
Response Percentages:					
No change--good as is	21	22	20	11	20
Make differences in work, not just marks	24	15	14	13	14
Separate phases into different classrooms	8	12	10	18	11
Try to change certain teachers	8	8	11	15	10
Some phase teachers not covering same material in same subject	5	6	7	14	7
More independent work		.2	.5		.3
Offer more courses in curriculum, esp. vocational or practical type	5	5	6	5	5
Reduce required courses		5	4	3	4
More audit courses--grades not averaged in class rank			.1		.06
Add more phases	8	3	5	2	5
Reduce difficulty in down phasing	8	5	4	2	4
Too much responsibility placed on student	5	4	3	1	3
Teachers should decide more on phase			.1		.06
Put phase no. in honor roll			.1	1	.2
Drop it--go back to traditional	3	6	2	.8	3
Unclassified	5	9	10	11	9

ject matter varied among teachers within a phase. Five percent would like more courses in the curriculum, especially vocational and practical courses. Only three percent would prefer to drop phasing and return to the traditional educational structure.

It appears that students have considerable responsibility for directing their own educational programs. In their comments on phasing effectiveness, students, especially those on higher levels, desired more separation. The lower phase as well as the upper phase students spoke of differences among teachers, the former group called for differences in work as well as marks and the latter wanted more consistency among teachers. The honor roll which does not classify by phase was mentioned adversely by only three students.

Objective 7

Teachers, parents and students were interviewed in an attempt to ascertain whether the objective of encouraging each student to develop an inward desire to learn (as opposed to a desire based on such direct external factors as adult approval, tests, grades, credits and promotion) was being put into practice. This objective was most difficult to measure. It was assumed that concentration on external forces would limit inward desire to learn.

Teachers were asked "Do you think there is a great deal of competition for grades among students in the various phases?" Responses from this question are reported in Table 26. Fifty percent of the teachers felt that there was competition for grades, especially in phases IV and V.

TABLE 26: Percentages of Responses of Professional Personnel by School to the Question:

Do you think there is a great deal of competition for grades among students in the various phases? Could you explain?

School	Jr. High	Sr. High	Total
Number	29	56	85
Response Percentages:			
Yes -- all phases	21	18	19
Yes -- phases 4 and 5	24	34	31
No	14	30	24
Not with peers in lower phases	7	2	4
Not very much in phase 3		7	5
Unclassified	34	9	18

Nineteen of this 50 percent said that there was competition for grades in all phases. Four percent of the teachers said that there was desire for high grades in the lower phases, not in competition with other students but rather in competition with the teacher. Five percent of the teachers indicated that phase III students did not compete very much for grades. The unclassified responses in part reflected those offered by instructors in non-academic areas as well as uniqueness in teacher responses. Based on teacher observations, there appears to be considerable competition for grades in the two schools.

When parents were asked what factors they felt influenced their son or daughter to do well in school, personal goals of the individual child were mentioned most often (39 percent). As can be seen in Table 27, the parents' interest of goals was the factor next most frequently mentioned. Competition with peers and teacher's incentive were both mentioned by 15

TABLE 27: Percentages of Responses of Parents of students by Mean Phase Placement to the Question:

What factors do you feel influence your son or daughter to do well in school?

Phase	3	4	5	Total
Number	23	65	15	103
Response Percentages:				
Personal goals - self	39	38	40	39
Parents' interest (goals)	17	20	20	19
Competition with peers	17	14	20	15
Teacher's incentive	17	15	7	15
Competition within family		8	7	6
Particular subjects	9	3	7	5
Guidance program		1		.9

percent of the group. Phase level of student did not differentiate parent responses. While personal goals were mentioned frequently, parents generally emphasized external factors significantly influencing school performance.

Parents were also asked what factors they felt influenced their son or daughter not to do well in school. These responses are reported in Table 28. It is interesting to note that teachers were among the most frequently (26 percent) mentioned negative factors, although parents (22 percent) also perceived student's own goals or interests capable of having a negative influence on performance. Parental goals were cited by four percent of the group, and the influence of peers by 14 percent. Twelve percent of the parents felt that the subject itself and their son or daughter's reaction to it was a factor influencing their child not to do well in school, and five percent indicated that extracurricular activities also influenced the student in this respect. Three percent thought that the school needed to push their child more and exert more pressure on him. There was little difference between responses of junior and senior high school parents by phase of their offspring.

TABLE 28: Percentages of Responses of Parents of Students by Mean Phase Placement to the Question:

What factors do you feel influence your son or daughter not to do well in school?

Phase	3	4	5	Total
Number	19	50	7	76
Response Percentages:				
Personal goals - self	26	20	28	22
Competition within family				
Competition with peers	21	14		14
Parents' interest (goals)		6		4
Teacher's incentive	31	24	28	26
Particular subjects	5	16		12
None	11	14	14	13
Extracurricular activities		6	14	5
School should push more	5		14	3

Students were asked how their teachers got them to learn. These responses will be described as related to all students and students by year in school and phase. Tables 29 and 29a include the responses given by all students and reveal that a variety of methods and attitudes are utilized to encourage learning.

TABLE 29: Percentages of Responses of Amherst Secondary Students by School Year to the Question:

How do your teachers get you to want to learn?

School Year	7	8	9	10	11	12	Total
Number	255	405	384	371	286	327	2.028
Response Percentages:							
Teachers interested in subject themselves	20	15	12	17	15	18	16
Involve the student/ discussions	10	12	16	13	14	17	14
Movies/audio visual	16	17	8	9	7	9	11
Depends if I like subject	14	9	3	7	5	11	8
Laboratory experiments	5	4	8	7	5	7	6
Threat of tests, grades and/or detention	6	8	4	7	6	6	6
Field trips	5	13	4	3	.3	3	5
Tell jokes	7	7	4	4	3	6	5
Provide variety	.8	.5	8	5	7	2	4
Relate class to life situations		.2	8	3	5	3	3
Gives us more homework	4	3	3	4	3	2	3
Personal interest in student	8	.2	5	2	2	.6	2
Independent projects			3	4	3	2	2
Outside reading			1	.3	1	.3	.5
They just do, I don't know how to explain it	.4	.2	2	.5	1	.3	.7
Depends upon teacher	1	1	1	2	3	1	1
They don't	9	9	7	7	14	9	9
Unclassified	2	.5	2	8	5	3	3

Regardless of phase and year, pupils reported that the most important aspect in getting them to want to learn was the teacher's interest in the subject (16 percent). When compared with upper phases, phase II and III students perceive a stimulating teacher as one who provides more field trips, uses audio visual equipment more frequently, gives more homework, and who is more humorous -- generally teacher oriented activities. The upper phase students, on the other hand, were stimulated by more student

TABLE 29A: Percentages of Responses of Amherst Secondary Students by Mean Phase Placement to the Question:

How do your teachers get you to want to learn?

Phase	2	3	4	5	Total
Number	48	572	1,259	158	2,028
Response Percentages:					
Teachers interested in subject themselves	10	13	17	16	16
Involve the student/ discussions	6	12	14	17	14
Movies/audio visual	19	12	11	7	11
Depends if I like subject	8	9	8	6	8
Laboratory experiments	2	6	6	6	6
Threat of tests, grades and/or detention	8	6	6	6	6
Field trips	8	7	4	4	5
Tell jokes	10	6	5	2	5
Provide variety		3	4	4	4
Relate class to life situations		3	3	5	3
Gives us more homework	8	4	3	2	3
Personal interest in student	4	1	2	.6	2
Independent projects		2	2	1	2
Outside reading		.9	.4		.5
They just do, I don't know how to explain it		.3	.7	2	.7
Depends upon teacher		3	1	.6	1
They don't	15	8	8	16	9
Unclassified		3	4	2	3

involvement -- discussions and laboratory experiments. Although comparisons between older or younger students were not as delineated as those between upper and lower phases, younger students were more likely to mention audio visual methods, field trips and less likely to mention student involvement methods.

Students were asked directly about an inward desire to learn. As expected, there was some ambiguity about the definition and interviewers usually had to repeat the question focusing on the word "inward." The 88.9 percent who responded affirmatively to the question, when exposed to a clarity probe from the interviewer, expressed difficulty in explaining "inward desire," occasionally alluded to external factors. The results are shown in Tables 30 and 30a.

TABLE 30: Percentages of Responses of Amherst Secondary Students by School Year to the Question:

Do you feel that you have an inward desire to learn?

School Year	7	8	9	10	11	12	Total
Number	216	299	294	269	195	240	1,513
Response Percentages:							
Yes	32	41	41	36	41	36	38
Yes, when teacher is interesting	20	17	5	13	6	13	12
Yes, when subject is interesting	35	28	24	30	29	34	30
Yes, I want to go to college	.5	1	10	3	6	4	4
Yes, I just know it			1	1	1	1	.9
Yes, I'm just curious	.9	.7	2	3	4	1	2
Doesn't come from the school--in me or from my parents	3	2	2	3	1	2	2
No	3	4	[illegible]	6	6	5	5
No, go to school just to be with friends			.3				.07
Depends upon mood I'm in	5	.7	4	1	1	2	2
Really don't know	4	3	2	2	3	2	3
Unclassified	9	1		1	1	.4	.8

TABLE 30A: Percentages of Responses of Amherst Secondary Students by Mean Phase Placement to the Question:

Do you feel that you have an inward desire to learn?

Phase	2	3	4	5	Total
Number	36	435	939	103	1,513
Response Percentages:					
Yes	50	39	37	42	38
Yes, when the teacher is interesting	11	12	13	8	12
Yes, when subject is interesting	17	26	31	33	30
Yes, I want to go to college		3	4	4	4
Yes, I just know it		1	.5	2	.9
Yes, I'm just curious	3	.9	2	3	2
Doesn't come from the school--in me or from my parents	3	3	2	3	2
No	3	10	3	4	5
No, go to school just to be with friends		.2			.07
Depends upon mood I'm in	3	1	2		2
Really don't know	5	3	2	1	3
Unclassified	5	.4	.7	1	.8

Inward desire as versus an outward desire to learn was mentioned by a somewhat larger proportion of phase II students than phase V students. Upper phase students were more likely than lower phases to relate their responses to their interest in a particular subject. Younger students more often focused on the importance of the teacher.

It seems that although teachers and parents tend to perceive school performance as being a result of outside forces, students frequently saw themselves as having an inward desire to learn. Once again, an inward desire to learn was defined as a minimization of direct external motivators. It was difficult to measure the extent to which it has been reached.

Objective 8

The eighth objective of the Amherst-Pelham Regional Secondary Schools was to "Provide each student who is willing to work with an opportunity to succeed (or at least avoid failure) in reaching those levels of achievement commensurate with his individual abilities and interests."

It was assumed that tests and grades received on tests and student reactions to them would reflect student satisfaction if achievement measurements were commensurate with their perceived ability. Students were asked, "How would you describe the tests a teacher gives to different phase students within the same class?" Twenty-four percent of the students, as shown in Tables 31 and 31a, said that the upper phase students were given more test items, 11 percent said that the tests were different,

TABLE 31: Percentages of Responses of Amherst Secondary Students by School Year to the Question:

How would you describe the tests a teacher gives to different phased students within the same class?

School Year	7	8	9	10	11	12	Total
Number	263	319	291	356	222	318	1.769
Response Percentages:							
More test items for upper phases	11	13	43	24	26	28	24
Graded differently but same test	20	12	11	17	14	14	15
Depends upon teacher	18	17	4	13	9	14	13
Different tests	11	11	8	11	12	12	11
Depends upon subject area	19	16	3	10	4	8	10
Grades more rigorously with increase phase	6	11	4	10	5	9	8
More depth for upper phases	.8	.3	11	.7	13	7	6
No difference observed	5	6	10	4	4	3	5
Not applicable	8	12	5	5	10	4	7
Unclassified				.6	3	.3	.5

TABLE 31A: Percentages of Responses of Amherst Secondary Students by Mean Phase Placement to the Question:

How would you describe the tests a teacher gives to different phased students within the same class?

Phase	2	3	4	5	Total
Number	44	496	1,076	153	1,769
Response Percentages:					
More test items for upper phases	9	21	26	24	24
Graded differently but same test	18	16	15	9	15
Depends upon teacher	30	13	12	11	13
Different tests	7	9	10	18	11
Depends upon subject area	23	10	10	11	10
Graded more rigorously with increase phase	5	9	8	6	8
More depth for upper phases	2	6	6	10	6
No difference observed	2	6	5	7	5
Not applicable	5	8	8	2	7
Unclassified		.4	.5	1	.5

and six percent thought that tests for upper phases had more depth. Fifteen percent of the students said that the tests were the same but that they were graded differently, and eight percent indicated that the grading was more rigorous for the upper phases. Junior high students and students in lower phases were more likely to report that use of tests varied depending upon the teacher or subject area. Five percent of the students said that they had observed no difference in either the test items or the method of grading.

The students seemed to feel that some provisions were being made for students of varying ability to meet with success, or at least not failure, in a testing situation. These provisions, however, appear to focus more on quantity of test items than upon quality.

Teachers were asked to describe the distribution (variability) of grades they gave in various phases. As shown in Table 32, 31 percent of the teachers said that they gave high grades in all classes and five percent said that they gave few D's and F's. In addition, 18 percent of the teachers indicated that the greatest variability in marks was within phase III and 18 percent said that their marks were normally distributed throughout all phases. Two percent followed no pattern in marking and one percent re-

TABLE 32: Percentages of Responses of Professional Personnel by School to the Question:

Describe the distribution (variability) of grades you give in various phases.

School	Jr. High	Sr. High	Total
Number	31	68	99
Response Percentages:			
High grades in all classes	23	35	31
Normal distribution in all phases	35	10	18
Most variability in Phase 3	6	24	18
Few D's and F's	3	6	5
D's and F's mostly in lower phases	3	4	4
Follow no pattern		3	2
Few A's		1	1
Unclassified	29	16	20

ported they gave few A's.

There seems to be a tendency for most teachers to at least try to provide individual students with an opportunity to succeed. Of the teachers who were asked how successful they thought they were in getting students in the various phases to work up to their potential (Table 33), 45 percent replied that they thought they were successful with students in all phases, 13 percent felt they were successful with phase IV and V students, 11 percent said they did not know how successful they were. Twelve percent of the high school teachers seemed to feel that they were not entirely successful in getting students to work up to their potential. Senior high school teachers seemed to be less confident of their success than junior high school teachers.

TABLE 33: Percentages of Responses of Professional Personnel by School to the Question:

How successful do you think you are in getting students in the various phases to work up to their potential?

School	Jr. High	Sr. High	Total
Number	25	51	76
Response Percentages:			
Yes, successful	72	31	45
Yes, high phases - 4, 5		20	13
Not successful		12	8
Not phase 3		6	4
No, lower phases - 1, 2		2	1
Don't know	12	10	11
Unclassified	16	20	18

When teachers were asked what effect their grade distribution had on students in different phases (Table 34), 25 percent answered that students were encouraged to do better, and 16 percent said that because of grade distributions, lower phase students seemed to have more feeling of success. Four percent of the teachers felt that brighter students in all phases were skeptical of A's. Perhaps because of phasing, according to the teachers, grades to some students do not mean much. The large number of unclassified responses largely reflects the teachers with no phased subjects.

TABLE 34: Percentages of Responses of Professional Personnel by School to the Question:

What effects have your grade distributions had on students in different phases?

School	Jr. High	Sr. High	Total
Number	23	46	69
Response Percentages:			
Encouraged to do better	35	20	25
Lower phases have more feeling of success	9	20	16
Upper phase students more concerned with phase than grades		9	6
Brighter students in any phase are skeptical of A's		7	4
High grades in lower phases, they then want to up phase	4	2	3
No different than old system	9	9	9
Unclassified	43	35	38

Thirty-nine percent of the teachers interviewed, as reported in Table 35, felt that the chief impact upon the students with the inauguration of the ungraded program was the opportunity for greater freedom for students. Twenty-four percent of this group of teachers felt that students would have to learn how to handle this new freedom and 15 percent felt that the students had too much freedom resulting in a lack of respect for the teachers. Eighteen percent of the teachers felt that the students were more challenged and seven percent commented upon the feeling of success that lower phase students were now able to experience.

TABLE 35: Percentages of Responses of Professional Personnel by School to the Question:

What do you think has been the chief impact on students with the inauguration of the ungraded program?

School	Jr. High	Sr. High	Total
Number	30	55	85
Response Percentages:			
Must learn to handle freedom	7	33	24
Too much freedom, lack of respect for teachers	10	18	15
Students are more challenged	27	13	18
Lower phase students can feel success	17	2	7
Students like school now	10	2	5
More conscious of grades		9	6
Different ages in same class		2	1
Phase no. is too important, creates elite		2	1
No difference	10	5	7
Unclassified	20	15	16

Parents were asked what kind of homework their son or daughter brought home. The parent responses are categorized in Table 35a.

TABLE 35A: Percentages of Responses of Parents of Studenty by Mean Phase Placement to the Question:

What kind of homework does your son or daughter bring home?

Phase	3	4	5	Total
Number	19	41	9	69
Response Percentages:				
Related to regular subject areas	37	27	44	35
Individual reports	11	12	30	14
Too little	21	17	22	19
Too much	5	5		4
About right	5	19		13
Less than last year		3		1
Don't really know	5	10		7
None	16	7		9

Most parents indicated that homework seemed to be related to regular classroom assignments and 14 percent indicated that their child did work on individual reports as a part of their homework. Parents also made comments concerning the quantity of homework. Nineteen percent of the parents thought that there was too little homework while only four percent felt that there was too much.

According to the parents interviewed, school subjects, social life, and teachers are the main topics of conversation about school that their children discussed at home. Grades and tests as topics of conversation were mentioned by only four percent respectively. It may be that with the inauguration of phasing, grades have less significance for students.

TABLE 35B: Percentages of Responses of Parents of Students by Mean Phase Placement to the Question:

When your son or daughter talks about school, what does he usually talk about?

Phase	3	4	5	Total
Number	31	64	15	110
Response Percentages:				
Subjects	23	23	27	29
Social Life	26	19	40	24
Teachers	23	23	20	23
Athletics	10	5	7	6
Grades and tests	3	5		4
Doesn't	10	14		11
Unclassified	6	2	7	4

Summary

The extent to which an opportunity was available to succeed at a level commensurate with individual abilities and interests was measured through interview questions concerning reported variability in tests, in grades and in homework assignments, as well as by the comments of students and parents about marks. Based on reports of students, it appeared that most teachers differentiate in tests given to various phases primarily by quantity of questions. Equal distribution of high grades to all phases did not appear to be a reality as reported by teachers. Phase III and lower phase students received a wider range of grades than did upper phases. A significant number (41 percent) of the teachers responded that grading by phase had a positive effect on school performance when some students in the lower phases received A's and B's for the first time. The predominant conversational topics parents described their children as talking about at home were not reported to be grades and tests. Most of the homework observed by the parents seemed more related to common classroom assignments than to individual projects.

Objective 9

The extent to which parents and students felt that they were provided with a meaningful and realistic appraisal of school achievement was ascertained through several interview questions. For example, parents were asked: "Are you aware of the ungraded program that has been introduced? How would you explain it? How did you learn about it?" According to Table 36, 94 percent were aware of the program. Of these, 69 percent described the program as one in which students were grouped on the basis of academic ability while eight percent indicated that the individual pupil was responsible for selecting phases. Thirteen percent of the group did not have sufficient understanding of the program to describe it. Finally, Table 36 reflects the efforts of school officials to utilize a variety of methods in acquainting parents with the program.

In response to the question, "How do your parents feel about the ungraded program?", 35 percent of the students indicated that their parents liked it while five percent felt that they did not. Although the percentage of students choosing the former alternative was consistent from grade to grade, higher phased students seemed to indicate more frequently that

TABLE 36: Percentages of Responses of Parents of Students by Mean Phase Placement to the Question:

A. Are you aware of the ungraded program that has been introduced?
B. If you are, how would you explain it?
C. If you are, how did you learn about it?

Phase		3	4	5	Total
Number					
Response Percentages:					
A.	Yes	84	98	100	94
	No	16	2		6
B.	Group by ability	61	75	72	69
	Selection of phase by student	6	5	28	8
	Don't understand	22	10		13
	Unclassified	11	10		9
C.	Newspaper	27	16	14	18
	PTA	15	20	14	19
	Children	19	14	14	15
	During registration of student	4	10		7
	Letter from superintendent	15	22	28	21
	Do not remember	4	2		2
	Unclassified	15	16	30	18

their parents knew about the program and were favorably disposed towards it. Those reporting parental dissatisfaction were evenly distributed among grades and phases. Table 37 also points toward a general tendency on the part of students in lower grades to have discussed the program with their parents.

Parental responses to the question, "What has been your reaction to methods of contact with the school such as report cards, letters, personal contacts, etc.?", are presented in Table 38. Sixty-five percent of the parents interviewed considered their contact with the school satisfactory;

TABLE 37: Percentages of Responses of Amherst Secondary Students by School Year to the Question:

How do your parents feel about the ungraded program?

School Year	7	8	9	10	11	12	Total
Number	182	223	254	214	181	188	1.242
Response Percentages:							
They like it	32	45	39	33	33	30	35
No strong feelings either way	35	34	16	24	23	30	26
They don't like it	5	4	4	4	6	5	5
They don't know much about it	23	13	13	19	13	24	17
Haven't discussed it	5	4	26	17	22	9	14
Unclassified			2	3	3	2	2

TABLE 37A: Percentages of Responses of Amherst Secondary Students by Mean Phase Placement to the Question:

How do your parents feel about the ungraded program?

Phase	2	3	4	5	Total
Number	34	346	777	85	1.242
Response Percentages:					
They like it	15	33	36	49	35
No strong feelings either way	44	28	25	24	26
They don't like it	3	4	5	5	5
They don't know much about it	35	18	17	6	17
Haven't discussed it	3	14	15	11	14
Unclassified		3	2	5	3

26 percent were generally satisfied but thought that improvements in communication could be made. It was noted that the latter group consisted of a higher percentage of Phase V students. Nine percent of those interviewed were dissatisfied with home-school communications.

TABLE 38: Percentages of Responses of Parents of Students by Mean Phase Placement to the Question:

What has been your reaction to methods of contact with the school, such as report cards, letters, open-houses, personal contacts, etc. ?

Phase	3	4	5	Total
Number	18	41	10	69
Response Percentages:				
Satisfactory	67	66	60	65
Generally satisfied but need more time to talk with teachers, open house not enough	22	24	40	26
Dissatisfied	11	10		9

In Table 39, parental reactions to one specific method of communication -- report cards -- is recorded. Although 80 percent of the group were satisfied with the cards in their present form, 11 percent thought that teacher comments would be a welcomed addition.

The reactions of parents to the question, "What role do you think tests play in the assignment of grades? ", are outlined in Table 40. Although 47 percent of those interviewed felt that tests were the most important element in determining a grade, 21 percent thought that tests were just one of many factors. Twenty-six percent did not know what role was played by tests in grade assignment.

TABLE 39: Percentages of Responses of Parents of Students by Mean Phase Placement to the Question:

What do you think of the present form of the report cards?

Phase	3	4	5	Total
Number	17	42	7	66
Response Percentages:				
Satisfied	88	79	72	80
Too complicated	6	2		3
Fair - good as can be under circumstances		2	14	3
Need teacher comments in addition to grade	6	12	14	11
Need explanation for phasing				
Want supplemental parent-teacher conferences		2		1
Add class rank		2		1

TABLE 40: Percentages of Responses of Parents of Students by Mean Phase Placement to the Question:

What role do you think tests play in the assignment of grades?

Phase	3	4	5	Total
Number	17	39	8	64
Response Percentages:				
Most important part	63	44	50	47
1/3 tests, 1/3 classroom, 1/3 quizzes		8		5
Just one of many factors	6	23	37	21
Really do not know	41	23	12	26
None		3		2

In response to the question, "Are the grades that your son or daughter receives indicative of what you feel are his capabilities? ", 51 percent (Table 41) of the group responded affirmatively. However, 46 percent felt that their child (children) could earn better grades.

TABLE 41: Percentages of Responses of Parents of Students by Mean Phase Placement to the Question:

Are the grades that your son or daughter receives indicative of what you feel are his capabilities?

Phase	3	4	5	Total
Number	23	45	9	77
Response Percentages:				
Yes	30	58	66	51
Think that he can do better	65	40	33	46
Do not know	5	2		3

Parents were asked if they knew their child's English phase. As evident from Table 42, 17 percent indicated that they were not aware of the phase in which their child was placed in English, while the remaining parents specified a phase level for their son or daughter. Generally speaking, parents of higher phased students seemed to be more conscious of their child's group.

TABLE 42: Percentages of Responses of Parents of Students by Mean Phase Placement to the Question:

Do you know what English phase your child is in?

Phase	3	4	5	Total
Number	18	39	8	65
Response Percentages:				
Yes	72	85	100	83
No	28	15		17

In view of the fact that a higher percentage of graduates continue their formal education beyond the secondary level (76 percent in 1966), it is imperative that the transcript and the method of determining class rank -- i. e., the weighting of grades according to phases (Table 43) -- be clearly understood by those who would evaluate a student's application. To this end, the directors of admissions at Amherst College, Greenfield Community College, Holyoke Community College, Mount Holyoke College, and the University of Massachusetts were asked to review a sample transcript and to respond to the following questions:

1. Do you find the grades given by phase to be adequate and useful?
2. Is the rank in class, when determined by weighting factors for phasing, a clear way for you to understand a student's school record?

TABLE 43: Amherst High School System for Assigning Weight to Marks Received in Ungraded Classes

Phase	1	2	3	4	5
Grade Points:					
A	4	5	6	7	8
B	3	4	5	6	7
C	2	3	4	5	6
D	1	2	3	4	5
F	0	0	0	0	0

The comments were constructively favorable. With the exception of two questions, one concerning the difference between phase V and the Advanced Placement Program and a second involving more explicit notation of phase on the transcript, admissions officials experienced no difficulty in interpreting the sample record.

Overall, the responses by students and parents to questions concerning meaningful and realistic appraisals of achievement seemed to indicate that parents are reasonably well informed in this regard as well as with the principles underlying the ungraded program. A majority of the parents seemed to perceive the program as based upon ability grouping. They were satisfied with regard to the effectiveness of home-school communications and with the method currently used to report grades, but some felt a need for additional parent-teacher contact. Although a majority of the parents thought that their children were achieving in accordance with their ability, a considerable number thought they could do better. Finally, higher education admissions officials experienced no difficulty in interpreting a student's secondary school transcript.

General Comments

A number of questions were asked which might contribute information on facilities, teacher interaction, teacher morale, and parents' views regarding the strengths and weaknesses of the school. Some of the responses reported in this section were given to final questions in the interview asking for any additional statements the interviewees might wish to make.

The responses of faculty members to the question, "Do you have a preference for teaching at certain phase levels?" are reported in Table 43a. Twenty-five percent said that they preferred phases IV and V.

Nine percent of the teachers said that they enjoyed that they enjoyed teaching phase III students most, and four percent disliked teaching in phase III because the students were too "borderline." Six percent of the senior high school teachers preferred lower phase classes (phases I and II). A majority of teachers expressed preferences for certain phases.

TABLE 43A: Percentages of Responses of Professional Personnel by School to the Question:

Do you have a preference for teaching at certain phase levels? Why?

School	Jr. High	Sr. High	Total
Number	32	71	103
Response Percentages:			
No preference	31	17	21
Yes	19	22	21
Prefer higher phases (4, 5)	18	28	25
Prefer phase 3	13	7	9
Prefer lower phases (1, 2)		8	6
Dislike phase 3 - too borderline		6	4
Unclassified	19	11	13

An attempt was made to ascertain whether teaching assignments to particular phases affected faculty social organization. This information is reported in Table 44. Seventy-nine percent of the faculty said "No" because most teachers taught all phases. Six percent of the senior high school teachers said that social groups were determined by affiliation with the two teacher lounges. One lounge is located in the newer section and apparently was more liberal and one is in the older section of the senior high school and appeared more conservative. However, five percent of the teachers felt that academic teachers looked down on those who taught skill subjects.

TABLE 44: Percentages of Responses of Professional Personnel by School to the Question:

Do you think that upper phase teachers or lower phase teachers see themselves as a different social group?

School	Jr. High	Sr. High	Total
Number	25	53	78
Response Percentages:			
No, because most teachers teach all phases	92	74	79
Yes		6	4
Academic teachers look down on skill subject teachers	4	6	5
Social groups decided on affiliation with particular lounge		6	4
Unclassified	4	9	8

Replies to the question, "What do you think has been the chief impact on teachers with the inauguration of the ungraded program?" are shown in Table 45. Twenty-five percent of the teachers said that they thought more about what they were doing and that writing objectives helped to bring this about. Twenty-two percent felt that with the ungraded program there was more pressure to do a good job. Twelve percent said that with the ungraded came more work. The senior high school teachers spoke more of pressure and increased work than did junior high teachers. Eleven percent, primarily on the junior high school level, indicated that the new grading system caused more focus on individual instruction. Six percent enjoyed teaching more and five percent enjoyed greater flexibility. Concern about student freedom was mentioned by a small number of senior high school teachers.

TABLE 45: Percentages of Responses of Professional Personnel by School to the Question:

What do you think has been the chief impact on teachers with the inauguration of the ungraded program?

School	Jr. High	Sr. High	Total
Number	28	74	102
Response Percentages:			
Thinking more about what they are doing (writing objectives)	18	27	25
Pressure to do a good job	11	26	22
More work with homogeneous grouping	7	13	12
Grading system causes more focus on individual instruction	25	5	11
Enjoy teaching more	14	3	6
More flexibility	3	5	5
Teacher has less say so in course and phase selection		4	3
Confused about student freedom		3	2
Know students better		1	1
Unclassified	21	12	15

Parents were asked if they thought the school's facilities were adequate. Eighty-three percent of the parents interviewed answered affirmatively while seven percent felt that the facilities were more than adequate. A small number of parents felt that the junior high facilities were not adequate.

Parents were also asked to list what they thought were some of the school's strong points. The variety of responses are reported in Table 46 by son's or daughter's phase. The staff was perceived as being a strong factor by 32 percent of the parents. This seemed more often stated about the senior high school than the junior high school. Twenty-five percent felt that phasing was a strong point. Other strengths mentioned by a small number of parents included laboratories, facilities, college program, and activities. Thirteen percent said that they did not know the strengths of the school system.

TABLE 46: Percentages of Responses of Parents of Students by Mean Phase Placement to the Question:

Could you list some of the School's strong points?

Phase	3	4	5	Total
Number	28	61	17	106
Response Percentages:				
Staff	25	38	24	32
Phasing	18	29	18	25
Facilities	11	6	12	8
Program learning	7	6	6	7
Creative activities--freedom		3	18	5
Extracurricular activities	11	2	6	5
Good college preparation	3	3	6	4
Laboratories		2	6	2
Breadth of program			6	.9
Don't know	25	10		12

Parents were also asked to list what they thought were some of the school's weak points. It is important to remember when reading Table 47 that these replies were solicited. Responses to this question were scattered among a variety of areas. For example, although 14 percent felt that there was too much freedom for the students, especially in the senior high school, parents mentioned such widely diverse areas as food, opportunities for teacher-parent communication, too much pressure on college, and weak teachers. Twenty-two percent said that they could not think of any weak points.

TABLE 47: Percentages of Responses of Parents of Students by Mean Phase Placement to the Question:

Could you list some of the School's weak points?

Phase	3	4	5	Total
Number	23	57	11	91
Response Percentages:				
Can't think of any	22	25	9	22
Too much freedom for students	26	12		14
Improve food	4	9	9	8
Certain teachers weak	9	5	9	6
More and better opportunities for teachers and parents to communicate	9	7		6
Too much pressure for college		7	9	5
Improve music department	4	3	9	4
Improve physical education	4	2		2
Improve foreign languages		2		1
More basic skills	4	2		2
Improve guidance department		3		2
Education for middle group weak		2		1
Need for more citizenship education		5		3
Program learning weak	4		9	2
Should not have a dress code		2	18	3
Ninth grade in Junior High		2		1
Need summer school		2		1
Other	13	11	27	13

Both parents and teachers were asked for additional comments about the school system. These comments are reported in Tables 48 and 49.

TABLE 48: Percentages of Responses of Parents of Students by Mean Phase Placement to the Question:

We would like to hear your ideas. Do you have any comments about what we have been talking about?

Phase	3	4	5	Total
Number	20	48	10	78
Response Percentages:				
Satisfied - no specific comment	40	33	20	33
Too much freedom for students	20	4	10	9
More school-parent contact	5	6	10	6
More guidance counselors needed	5	6		5
Improve teachers	5	4	10	5
High pressure in upper phases		6	10	5
Improve middle phases		6		4
Phase does not determine social position		4		3
Present honor roll not meaningful		4		3
Too much experimentation	5	2		3
Lower phases false sense of security		4		3
Smaller classes		2	10	3
Better than old way			20	3
Like student freedom		2		1
Like work study program	5	4		4
Unclassified	15	10	10	11

TABLE 49: Percentages of Responses of Professional Personnel by School to the Question:

Do you have any additional comments you would like to make about the ungraded program in the Amherst school system?

School	Jr. High	Sr. High	Total
Number	32	65	97
Response Percentages:			
Like ungraded plan	44	31	35
Expand staff and facilities	16	5	8
Tighten up on student freedom i. e., pass system		12	8
Have smaller classes	3	11	7
Staff have more control on phase placement	6	3	5
More committee meetings needed with administration		6	4
Need more variety in course offerings	3	3	3
Need less rigidity in teachers	6	1	3
Pressure felt more by higher phases students than lower		3	2
Add one other phase in middle phases 3a, 3b		3	2
Change presents more problems	3	1	2
New teachers need orientation		1	1
Want more freedom and responsibility		1	1
Unclassified	19	17	17

Thirty-three percent of the parents said they were satisfied and had no particular comments and 35 percent of the teachers said that they liked the ungraded plan. Twelve percent of the senior high school teachers and nine percent of the parents commented that there was too much freedom for the students. Three percent of the parents and seven percent of the teachers thought the school should have smaller classes. Five percent of the parents thought that the school needed more guidance counselors and five percent of the teachers thought that the staff should have more control on phase placement. Four percent of the parents felt that the middle phase needed curriculum improvement and two percent of the teachers suggested that another phase be added in the middle, since this phase contained the widest range of performance levels. Five percent of the parents and two percent of the teachers felt that there was more pressure on the upper phase students than lower phase students. A small percentage of teachers in the senior high school wanted more contact with administrative officials.

These and various other comments were made by both parents and teachers. However, those mentioned indicate some similarities in points of view between teachers and parents concerning the ungraded program in the Amherst-Pelham Regional Secondary Schools.

CHAPTER V: RESULTS FROM GROUP ADMINISTERED INSTRUMENTS

Activities Checklist

The Activities Checklist was designed to elicit information regarding the amount of time allocated for specific non-instructional endeavors.

Specifically, the instrument permitted each student to approximate the amount of time spent during the previous week in the following areas:

Inside school activities (clubs, sports, other)
Outside school activities (Scouting, 4-H, church organizations)
Guidance office
Independent study
Library
Other

Each student in the senior high school completed the activities checklist. Results, presented in table form for each of the four classes, are organized with regard to mean phase (3, 4, 5) and mean letter grade (A, B, C, D, F). The number of individuals is first presented, and the number of hours spent in several activities follows. Totals and sub-totals are weighted means.

Three general tendencies in the data seem to appear with consistency for each of the four classes. First, the average number of hours spent in all activities increased for each mean phase level from phase 3 to 5. Second, the average number of hours spent in all activities increased for each mean letter grade from letter grade F to A. Third, with the exception of students in phase 5, girls seemed to spend more time than boys in both inside and outside school activities.

Number of individual students (Grade 9) according to mean phase and mean letter grade:

Letter Grade			A	B	C	D	F	Sub. Total*	TOTAL*
Phase	5	Boys	1	2	0	0	0	3	9
		Girls	2	4	0	0	0	6	
	4	Boys	7	44	20	1	0	72	124
		Girls	5	37	10	0	0	52	
	3	Boys	0	10	19	4	0	33	59
		Girls	0	16	10	0	0	26	
	Sub. *	Boys	8	56	39	5	0	108	192
		Girls	7	57	20	0	0	84	
TOTAL*			15	113	59	5	0	192	

Average hours per week spent by students (Grade 9) according to mean phase and mean letter grade in Inside School Activities:

Letter Grade			A	B	C	D	F	Sub. Total*	TOTAL*
Phase	5	Boys	9	3.5				5.3	4.1
		Girls	4.5	3				3.5	
	4	Boys	1.9	1.7	1.1	4		1.6	1.9
		Girls	3.6	2.3	1.5			2.3	
	3	Boys		1.2	1.3	1		1.2	1.2
		Girls		2	1.1			1.7	
	Sub. *	Boys	2.8	1.7	.9	1.6		1.5	1.8
		Girls	3.9	2.3	1.3			2.2	
TOTAL*			3.3	2	1	1.6		1.8	

Average hours per week spent by students (Grade 9) according to mean phase and mean letter grade in Outside School Activities:

Letter Grade			A	B	C	D	F	Sub. Total*	TOTAL*
Phase	5	Boys	3	1				1.7	1.7
		Girls	1.5	1.8				1.7	
	4	Boys	1.1	.8	1.1			.9	.8
		Girls	1.4	.6	.6			.7	
	3	Boys		1	.7	.3		.8	.9
		Girls		.8	1			.9	
	Sub. *	Boys	1.3	.8	1	0		.9	.8
		Girls	1.4	.7	.8			.8	
TOTAL*			1.4	.8	.9	0		.8	

*Weighted Means

Average hours per week spent by students (Grade 9) according to mean phase and mean letter grade in the Library:

Letter Grade			A	B	C	D	F	Sub. Total*	TOTAL*
Phase	5	Boys	1	5.5				4	2.5
		Girls	3.8	.8				1.8	
	4	Boys	3.6	2.7	3.6	2		3	2.9
		Girls	2.2	3.3	1.2			2.8	
	3	Boys		2.9	2.5	2.5		2.6	2.6
		Girls		2.4	3			2.6	
	Sub. *	Boys	3.3	2.8	2.9	2.4		2.8	2.8
		Girls	2.7	2.9	2.1			2.7	
TOTAL*			3	2.8	2.6	2.4		2.8	

Average hours per week spent by students (Grade 9) according to mean phase and mean letter grade in the Guidance Office:

Letter Grade			A	B	C	D	F	Sub. Total*	TOTAL*
Phase	5	Boys	0	0				0	.7
		Girls	.5	1.3				1	
	4	Boys	0	0	1.4	0		.4	.8
		Girls	0	1.9	.3			1.4	
	3	Boys		0	0	.3		.0	.1
		Girls		.2	0			.1	
	Sub. *	Boys	0	0	.7	.2		.3	.6
		Girls	.1	1.4	.1			1	
TOTAL*			.1	.7	.5	.2		.6	

Average hours per week spent by students (Grade 9) according to mean phase and mean letter grade in Independent Study:

Letter Grade			A	B	C	D	F	Sub. Total*	TOTAL*
Phase	5	Boys	0	1.5				1	.3
		Girls	0	0				0	
	4	Boys	2.1	.4	1.1	0		.8	.7
		Girls	1.8	.6	.7			.7	
	3	Boys		.3	.3	1.5		.4	.5
		Girls		.2	1.3			.6	
	Sub. *	Boys	1.8	.4	.6	1.2		.6	.6
		Girls	1.3	.4	1			.6	
TOTAL*			1.6	.4	.8	1.2		.7	

*Weighted Means

Average hours per week spent by students (Grade 9) according to mean phase and mean letter grade in Other Activities:

Letter Grade			A	B	C	D	F	Sub Total*	Total*
Phase	5	Boys	4	0				1.3	.4
		Girls	0	0				0	
	4	Boys	0	.6	.7	.6		.6	.5
		Girls	0	.2	1.7			.5	
	3	Boys		0	.2	0		.1	.4
		Girls		.5	1.5			.9	
	Sub. *	Boys	.5	.5	.4	.1		.4	.5
		Girls	0	.3	1.6			.6	
TOTAL*			.3	.4	.8	.1		.5	

*Weighted Means

Number of individual students (Grade 10) according to mean phase and mean letter grade:

Letter Grade			A	B	C	D	F	Sub Total*	TOTAL*
Phase	5	Boys	0	9	0	0	0	9	13
		Girls	1	2	1	0	0	4	
	4	Boys	1	41	15	0	0	57	130
		Girls	10	55	6	0	0	73	
	3	Boys	0	19	13	6	1	39	57
		Girls	0	9	9	0	0	18	
	Sub. *	Boys	1	69	28	6	1	105	200
		Girls	11	66	18	0	0	95	
TOTAL*			12	135	46	6	1	200	

Average hours per week spent by students (Grade 10) according to mean phase and mean letter grade in Inside School Activities:

Letter Grade			A	B	C	D	F	Sub. Total*	TOTAL*
Phase	5	Boys		2.1				2.1	2
		Girls	2	2.5	.1			1.8	
	4	Boys	1	2.1	1.6			1.9	2.7
		Girls	3.9	3.2	2.4			3.2	
	3	Boys		.6	.7	.6	2	.7	.9
		Girls		1.1	1.6			1.3	
	Sub. *	Boys	1	1.7	1.2	.6	1	1.5	2.1
		Girls	3.7	2.9	1.9			2.8	
TOTAL*			3.5	2.3	1.5	.6	1	2.1	

Average hours per week spent by students (Grade 10) according to mean phase and mean letter grade in Outside School Activities:

Letter Grade			A	B	C	D	F	Total*	TOTAL*
Phase	5	Boys		1.1				1.1	1.9
		Girls	2	4	5			3.8	
	4	Boys	1	.8	.3			.7	.8
		Girls	.5	.9	1.5			.9	
	3	Boys		.7	.7	.5	0	.7	.5
		Girls		.3	.2			.3	
	Sub. *	Boys	1	.8	.5	.5	0	.7	.8
		Girls	.6	.9	1			.9	
TOTAL*			.7	.9	.7	.5	0	.8	

*Weighted Means

Average hours per week spent by students (Grade 10) according to mean phase and mean letter grade in the Library:

Letter Grade			A	B	C	D	F	Sub. Total*	TOTAL*
Phase	5	Boys		7.2				7.2	5.5
		Girls	2	1.8	.8			1.6	
	4	Boys	0	4.4	3.9			4.2	4.1
		Girls	4.7	4.1	3.1			4.1	
	3	Boys		3.4	2.9	.1	1	2.7	2.8
		Girls		3.7	2.8			3.3	
	Sub. *	Boys	0	4.5	3.4	.1	.5	3.8	3.8
		Girls	4.5	4	2.8			3.8	
TOTAL*			4.1	3.9	3.2	.1	.5	3.8	

Average hours per week spent by students (Grade 10) according to mean phase and mean letter grade in the Guidance Office:

Letter Grade			A	B	C	D	F	Sub. Total*	TOTAL*
Phase	5	Boys		.1				.1	.2
		Girls	0	.5	.5			.4	
	4	Boys	0	.0	.0			.0	.2
		Girls	.2	.3	.6			.3	
	3	Boys		.2	.2	.1	.5	.2	.2
		Girls		.5	.2			.3	
	Sub. *	Boys	0	.1	.1	.1	.3	.1	.2
		Girls	.2	.3	.4			.3	
TOTAL*			.2	.2	.2	.1	.3	.2	

Average hours per week spent by students (Grade 10) according to mean phase and mean letter grade in Independent Study:

Letter Grade			A	B	C	D	F	Sub. Total*	TOTAL*
Phase	5	Boys		1.1				1.1	.8
		Girls	1	0	0			.3	
	4	Boys	0	.9	1.7			1.1	.9
		Girls	.1	.9	.6			.8	
	3	Boys		1.1	.6	.5	0	.7	.7
		Girls		1	0			.5	
	Sub. *	Boys	0	1	1.1	.5	0	1	.8
		Girls	.2	.9	.3			.7	
*TOTAL			.2	1	.8	.5	0	.8	

*Weighted Means

Average hours per week spent by students (Grade 10) according to mean phase and mean letter grade in Other Activities:

Letter Grade			A	B	C	D	F	Sub. Total*	TOTAL*
Phase	5	Boys		1.2				1.2	.8
		Girls	0	0	0			0	
	4	Boys	0	.9	.6			.8	.7
		Girls	1.2	.4	1.4			.6	
	3	Boys		1.3	1.6	3.8	13	2.1	1.6
		Girls		0	1.4			.7	
	Sub. *	Boys	0	1	1.1	3.8	6.5	1.3	1
		Girls	1.1	.3	1.3			.6	
TOTAL*			1	.7	1.2	3.8	6.5	1	

*Weighted Means

Number of individual students (Grade 11) according to mean phase and mean letter grade:

Letter Grade			A	B	C	D	F	Sub. Total*	TOTAL*
Phase	5	Boys	2	13	2	0	0	17	29
		Girls	3	9	0	0	0	12	
	4	Boys	2	40	17	0	3	62	121
		Girls	6	35	14	4	0	59	
	3	Boys	0	7	7	1	0	15	22
		Girls	0	4	2	1	0	7	
	Sub. *	Boys	4	60	26	1	3	94	172
		Girls	9	48	16	5	0	78	
TOTAL*			13	108	42	6	3	172	

Average hours per week spent by students (Grade 11) according to mean phase and mean letter grade in Inside School Activities:

Letter Grade			A	B	C	D	F	Sub. Total*	TOTAL*
Phase	5	Boys	3	4.1	1.5	0	0	3.7	3.6
		Girls	4	3.3	0	0	0	3.5	
	4	Boys	2.5	1.9	1.6	0	2.3	1.9	2.3
		Girls	5.3	2.9	1.7	1	0	2.7	
	3	Boys	0	.9	1	0	0	.9	1.1
		Girls	0	.8	3.5	0	0	1.5	
	Sub. *	Boys	2.8	2.3	1.4	0	2.3	2	2.3
		Girls	4.9	2.8	1.9	.8	0	2.7	
TOTAL*			4.2	2.5	1.6	.7	2.3	2.3	

Average hours per week spent by students (Grade 11) according to mean phase and mean letter grade in Outside School Activities:

Letter Grade			A	B	C	D	F	Total*	TOTAL*
Phase	5	Boys	2	1.5	2	0	0	1.6	1.4
		Girls	.7	1.3	0	0	0	1.2	
	4	Boys	0	1.2	.6	0	.7	1	.8
		Girls	1.2	.8	.4	.3	0	.7	
	3	Boys	0	.4	.7	.0	0	.5	.7
		Girls	0	1.3	1	0	0	1	
	Sub. *	Boys	1	1.2	.7	0	.7	1	.9
		Girls	1	.9	.5	.2	0	.8	
TOTAL*			1	1.1	.6	.2	.7	.9	

*Weighted Means

Average hours per week spent by students (Grade 11) according to mean phase and mean letter grade in the Library:

Letter Grade			A	B	C	D	F	Sub. Total*	TOTAL*
Phase	5	Boys	2.5	2.8	0	0	0	2.4	3
		Girls	4.5	3.6	0	0	0	3.8	
	4	Boys	2.8	2.4	3.2	0	.7	2.6	2.8
		Girls	4.3	3.1	2.7	2.3	0	3.1	
	3	Boys	3	2.1	15	0	0	3.4	3.3
		Girls	0	2.8	5.5	0	0	3.2	
	Sub. *	Boys	2.6	2.7	15	0	0	2.7	2.9
		Girls	4.4	3.2	3.1	1.8	0	3.2	
*TOTAL			2.8	2.8	4	0	0	2.9	

Average hours per week spent by students (Grade 11) according to mean phase and mean letter grade in the Guidance Office:

Letter Grade			A	B	C	D	F	Sub. Total*	TOTAL*
Phase	5	Boys	0	.5	0	0	0	.4	.3
		Girls	.3	.1	0	0	0	.2	
	4	Boys	.5	.3	.2	0	.3	.3	.3
		Girls	.3	.4	.6	.1	0	.4	
	3	Boys	0	.9	1	0	0	.9	.6
		Girls	0	0	0	0	0	0	
	Sub. *	Boys	.3	.4	.4	0	.3	.4	.4
		Girls	.3	.3	.5	.1	0	.3	
TOTAL*			.3	.4	.5	.1	.3	.4	

Average hours per week spent by students (Grade 11) according to mean phase and mean letter grade in Independent Study:

Letter Grade			A	B	C	D	F	Total*	TOTAL*
Phase	5	Boys	1.5	1.1	0	0	0	1	1.1
		Girls	1.3	1.3	0	0	0	1.3	
	4	Boys	2.5	1.3	1.4	0	1	1.4	.9
		Girls	.3	.5	.6	0	0	.5	
	3	Boys	0	1	2.1	0	0	1.4	1
		Girls	0	0	0	0	0	0	
	Sub. *	Boys	2	1.2	1.5	0	1	1.3	1
		Girls	.6	.6	.5	0	0	.6	
TOTAL*			1.1	.9	1.1	0	1	1	

*Weighted Means

Average hours per week spent by students (Grade 11) according to mean phase and mean letter grade in Other Activities:

Letter Grade			A	B	C	D	F	Total*	TOTAL*
Phase	5	Boys	0	1.1	2.5	0	0	1.1	.7
		Girls	0	0	0	0	0	0	
	4	Boys	0	1	1.2	0	7.3	1.3	1.1
		Girls	1.7	.7	,7	1	0	.8	
	3	Boys	0	1.2	.9	0	0	1	.8
		Girls	0	.5	0	0	0	.3	
	Sub. *	Boys	0	1	1.2	0	7.3	1.2	1
		Girls	1.1	.6	.6	.8	0	.6	
*TOTAL			.8	.8	1	.7	7.3	1	

*Weighted Means

Number of individual students (Grade 12) according to mean phase and mean letter grade:

Letter Grade Phase			A	B	C	D	F	Sub. Total*	TOTAL*
	5	Boys	2	11	3	0	0	16	23
		Girls	1	6	0	0	0	7	
	4	Boys	5	37	9	0	0	51	99
		Girls	10	34	4	0	0	48	
	3	Boys	0	6	14	0	0	20	31
		Girls	2	6	3	0	0	11	
	Sub. *	Boys	7	54	26	0	0	87	153
		Girls	13	46	7	0	0	66	
TOTAL*			20	100	33	0	0	153	

Average hours per week spent by students (Grade 12) according to mean phase and mean letter grade in Inside School Activities:

Letter Grade Phase			A	B	C	D	F	Sub. Total*	TOTAL*
	5	Boys	4.5	6.2	3	0	0	5.4	5.2
		Girls	3	5.2	0	0	0	4.9	
	4	Boys	3.4	2.5	2.7	0	0	2.6	3.3
		Girls	4.2	4.1	3	0	0	4	
	3	Boys	0	2.2	1.2	0	0	1.5	2
		Girls	4	2.7	2.7	0	0	2.9	
	Sub. *	Boys	3.7	3.2	1.9	0	0	2.9	3.3
		Girls	4.1	4.1	2.9	0	0	3.9	
TOTAL*			3.9	3.6	2.1	0	0	3.3	

Average hours per week spent by students (Grade 12) according to mean phase and mean letter grade in Outside School Activities:

Letter Grade Phase			A	B	C	D	F	Sub. Total*	TOTAL*
	5	Boys	0	1.1	0	0	0	.8	.7
		Girls	0	.5	0	0	0	.4	
	4	Boys	0	.5	.2	0	0	.4	.7
		Girls	1.2	1	1.8	0	0	1.1	
	3	Boys	0	.8	.5	0	0	.6	.6
		Girls	0	1.3	0	0	0	.7	
	Sub. *	Boys	0	.7	.3	0	0	.5	.7
		Girls	.9	1	1	0	0	1	
TOTAL*			.6	.8	.5	0	0	.7	

*Weighted Means

Average hours per week spent by students (Grade 12) according to mean phase and mean letter grade in the Library:

Letter Grade			A	B	C	D	F	Sub. Total*	TOTAL*
Phase	5	Boys	3.8	3.2	3.5	0	0	3.3	3
		Girls	0	2.7	0	0	0	2.3	
	4	Boys	5	1.5	3.4	0	0	2.2	2.4
		Girls	3	2.8	1.3	0	0	2.7	
	3	Boys	0	.7	1.9	0	0	1.5	2.3
		Girls	2	3.9	4	0	0	3.6	
	Sub. *	Boys	4.7	1.8	2.6	0	0	2.2	2.5
		Girls	2.6	2.9	2.5	0	0	2.8	
TOTAL*			3.3	2.3	2.5	0	0	2.5	

Average hours per week spent by students (Grade 12) according to mean phase and mean letter grade in the Guidance Office:

Letter Grade			A	B	C	D	F	Sub. Total*	TOTAL*
Phase	5	Boys	.4	.1	0	0	0	.1	.1
		Girls	0	0	0	0	0	0	
	4	Boys	.2	.1	.5	0	0	.2	.2
		Girls	.1	.2	.1	0	0	.2	
	3	Boys	0	.1	.1	0	0	.1	.1
		Girls	0	0	.7	0	0	.2	
	Sub. *	Boys	.3	.1	.2	0	0	.2	.2
		Girls	.1	.1	.4	0	0	.2	
TOTAL*			.1	.1	.3	0	0	.2	

Average hours per week spent by students (Grade 12) according to mean phase and mean letter grade in Independent Study:

Letter Grade			A	B	C	D	F	Sub. Total*	TOTAL*
Phase	5	Boys	.5	2.4	4	0	0	2.5	2.4
		Girls	0	2.5	0	0	0	2.1	
	4	Boys	1	1.3	1	0	0	1.2	1.1
		Girls	2.1	.6	1.3	0	0	1	
	3	Boys	0	0	0	0	0	0	.7
		Girls	0	2.7	1.7	0	0	1.9	
	Sub*	Boys	.9	1.4	.8	0	0	1.2	1.2
		Girls	1.6	1.1	1.5	0	0	1.3	
TOTAL*			1.3	1.3	.9	0	0	1.2	

*Weighted Means

Average hours per week spent by students (Grade 12) according to mean phase and mean letter grade in Other Activities:

Letter Grade			A	B	C	D	F	Sub. Total*	TOTAL*
Phase	5	Boys	7.5	1.2	0	0	0	1.8	1.2
		Girls	0	0	0	0	0	0	
	4	Boys	1	.6	.6	0	0	.6	.6
		Girls	.5	.6	1.3	0	0	.6	
	3	Boys	0	0	3	0	0	2.1	1.5
		Girls	0	.7	0	0	0	.4	
	Sub. *	Boys	2.9	.7	1.8	0	0	1.2	.9
		Girls	.4	.5	.7	0	0	.5	
*TOTAL			1.3	.6	1.6	0	0	.9	

*Weighted Means

The Closed Questionnaire

The Closed Questionnaire was developed to test the hypotheses as generated from the objectives outlined in Chapter 1.

The instrument contains 80 questions, each of which was designed to elicit information concerning a specific objective. It is "closed" in the sense that the question's response categories were defined prior to the Questionnaire's administration.

The Closed Questionnaire was administered to 90 percent of the students in the graduating classes of 1967, 1968, 1969, and 1970. Chi square analysis of variance was employed in treating student responses to each question according to: (1) mean letter grade in the previous marking period, (2) mean phase and (3) year of graduation.

Results, organized according to objectives, are presented in two ways. First, significance ($p < .05$) is simply noted ("x") according to the variables outlined above. Second, "Distribution by Percentages" tables are presented for each question which yielded a significant response.

Students were first asked to identify their favorite subject and the subject which they disliked most, then to check their best and poorest grade subjects. Although students tended to identify social studies, English and mathematics as favorite subjects, they also listed them as well as foreign languages, most often as disliked courses. It might be noted that "C" and "B" students and those in phases 3 and 4 seemed to like science more than did their fellow pupils; that "D" students more frequently identified social studies as a favorite and foreign language as a most disliked subject; and that a larger percentage of older students disliked English.

In identifying subjects in which best and poorest grades were received, lower achievers (D's) less often reported best grades in mathematics and more frequently did well in social studies. Phase 4 and 5 students tended to identify foreign language and mathematics as a best grade subject, whereas phase 3 pupils seemed to do both best and poorest in social studies. Perhaps percentages such as these reflect a general tendency on the part of phase 3 students as well as those who received C's and D's to select subjects in the area of social studies before those in mathematics and foreign language.

Students were also asked, in the context of their favorite, best grade, worst grade and most disliked subjects, to react to the teacher's enthusiasm, preparation and presentation. Generally, a higher percentage of lower achieving students (those earning C's and below) tended to check the extreme of the response alternatives to these questions. All students generally saw their favorite and best grade subject as containing more useful information and as being more relevant in terms of hobbies and future goals than their worst grade and/or most disliked subject.

The families of low achieving (D) students more often did not show great interest in their favorite subject and in the subject in which they received their best mark. Moreover, a higher percentage of those who received C's and D's perceived their classmates as non-competitive in their favorite and best grade subjects.

Several questions attempted to determine how students spent their time. Lower achieving students, phase 3 pupils and older individuals seemed to spend more hours per week working outside the home during the school year. Upper phased students, those receiving A's and B's and older pupils tended to spend less time watching T. V. during the school week. When asked how much time they spent on homework each day, a higher percentage of C and D students again checked the extreme alternatives--"none to half an hour" or "more than two hours" on each subject per day. This group also indicated that they spent three, four or five or more hours per week in non-required reading in social studies, science and in history; this is considerably more time than indicated by higher achieving students.

Several questions attempted to ascertain attitudes about self and to relate personal values to certain aspects of the school program. For example, it is not surprising to note that "A" students perceived themselves as doing "above average" to "very well" in school, that students earning B's frequently indicated that they were "average" to "above average", and even that "C" students most often said they were "average"; but it seems unusual that such a high proportion of pupils averaging D's and F's maintained that they were doing "average" or "very well" in school. It is interesting to note that the percentage of students assuming final responsibility for selecting their courses rose in the process of examining grades from F to A, phase from 3 to 5 and years of graduation from '70 through '67.

Although most students emphasized the importance of good grades, those averaging A's usually felt that it was extremely important, both for themselves and for their friends, while B, C, and D students more frequently said that it was very important. Similarly, higher achieving pupils tended to respond more strongly to questions regarding the amount of personal satisfaction in working hard on studies and the extent of personal admiration for very bright students in school. A higher percentage of "A" pupils, as well as those in phase 5, perceived themselves as bright. However, they seemed to indicate more frequently that they would change themselves somewhat; "C" and "D" students and those in phase 3 tended to say that they would not change themselves at all.

Finally, several questions permitted comments regarding differences in course material between phases. A majority of students felt that course content differed a "little" to "somewhat" between phases, with about one-fifth to one-third indicating that considerable differences were in evidence for each subject area. A higher percentage of those students receiving D's tended to minimize differences by checking the "very little" or "not at all" categories.

Objective 2

To provide an instructional program that establishes the greatest possible relationship between a student's placements in a curriculum and his needs and abilities as an individual.

	Letter Grade	Phase	Year Grad.
Favorite subject	x	x	x
Content of favorite subject	x		
Teacher attitude	x		
Teacher preparation	x		
Teacher presentation	x		
Best grade subject	x	x	x
Content of best grade subject	x		
Teacher attitude	x		
Teacher preparation	x		
Teacher presentation	x		
Subject dislike	x	x	x
Content of subject dislike	x		x
Teacher attitude	x		
Teacher preparation	x		
Teacher presentation	x		x
Poorest grade subject	x	x	x
Content of poorest grade subject	x		
Teacher attitude	x		
Teacher preparation	x		
Teacher presentation	x		x

"x" denotes significance ($p < .05$)

Objective 2: Percentage Response Category Tables

1. What presently is your favorite subject?

Letter Grade df = 36; x^2 = 1539.9	A	B	C	D	F
Response Percentages:					
English	23	19	17	29	
Social Studies	25	25	22	41	
Foriegn Language	9	11	6	6	
Music		2	2		
Math	16	15	15	12	50
Business	3	2	2		
Science	9	17	20		50
Industrial Art	7	5	10	12	
Arts	5	3	5		
Home Ec.	2	1	2		

Phase df = 36; x^2 = 1059.2	3	4	5
Response Percentages:			
English	19	18	22
Social Studies	25	24	27
Foreign Language	3	11	16
Music	3	2	.5
Math	11	16	16
Business	2	3	
Science	20	17	12
Industrial Art	11	5	.5
Arts	4	3	3
Home Ec.	1	2	

Year Graduate df = 27; x^2 = 300.4	70	69	68	67
Response Percentages:				
English	17	22	22	15
Social Studies	24	23	22	30
Foreign Language	10	10	13	4
Music	5	1		2
Math	15	16	15	14
Business	1	2	3	4
Science	17	19	15	16
Industrial Art	5	5	7	9
Arts	4	3	2	4
Home Ec.	1	1	1	2

2. The content of my favorite subject is:

Letter Grade df = 16; x^2 = 672.8	A	B	C	D	F
Response Percentages:					
Very interesting	38	40	39	35	
Quite interesting	53	47	46	41	50
Slightly interesting	7	10	10	6	
Slightly boring	2	2	2	18	
Very boring		.5	2		50

3. The teacher is:

Letter Grade df = 16; x^2 = 678.1	A	B	C	D	F
Response Percentages:					
Highly enthusiastic	52	38	38	50	50
Quite enthusiastic	38	48	43	38	
Slightly enthusiastic	7	11	14	6	
Not enthusiastic	3	2	5	6	50

4. The teacher:

Letter Grade df = 16; x^2 = 661.1	A	B	C	D	F
Response Percentages:					
Very well prepared for class	53	41	44	50	100
Well prepared for class	25	39	39	38	
Adequately prepared for class	16	16	13	13	
Inadequately prepared for class	5	4	4		
Completely unprepared for class		.7			

5. The teacher

Letter Grade df = 16; x^2 = 624.9	A	B	C	D	F
Response Percentages:					
Has a wide and varied presentation of course material and brings in his own experiences	41	36	37	35	
Varies the presentation of the course material and uses personal experiences	39	42	42	47	
Varies the presentation of the same material slightly	13	11	10	18	
Continually presents the same material but brings in a few of his own experiences.	2	5	5		
Continually presents the same course material in the same way	5	5	5	6	100

6. In what subject do you presently get the best grades?

Letter Grade df = 36; x^2 = 1649.3	A	B	C	D	F
Response Percentages:					
English	20	21	18	24	50
Social Studies	23	25	27	59	
Foreign Language	18	14	8	6	
Music	5	2	3		
Math	20	20	24	3	
Business	3	1	2		
Science	7	10	9		50
Industrial Arts	3	4	4	3	
Arts		1	3		
Home Ec.		.5	1		

Phase df = 36; x^2 = 1144.7	3	4	5
Response Percentages:			
English	23	19	19
Social Studies	32	25	18
Foreign Language	5	14	21
Music	2	3	
Math	18	21	28
Business	1	2	
Science	8	10	13
Industrial Arts	7	4	
Arts	2	1	
Home Ec.		1	

Year Graduate df = 27; x^2 = 417.3	70	69	68	67
Response Percentages:				
English	14	23	24	21
Social Studies	30	22	22	31
Foreign Language	12	16	18	4
Music	4	1	3	3
Math	25	26	15	15
Business	1	1	3	3
Science	10	8	10	11
Industrial Arts	3	2	3	10
Arts	1	1		3
Home Ec.		1		

7. The content of the subject in which I get my best grades is:

Letter Grade df = 16; x^2 = 354.5	A	B	C	D	F
Response Percentages:					
Very interesting	19	24	22	50	50
Quite interesting	39	44	35	17	
Slightly interesting	32	20	26	17	
Slightly boring	6	8	9	17	50
Very boring	3	5	8		

8. The teacher is:

Letter Grade df = 16; x^2 = 636.6	A	B	C	D	F
Response Percentages:					
Highly enthusiastic	34	32	24	17	50
Quite enthusiastic	38	47	45	50	
Slightly enthusiastic	28	16	20	17	
Not enthusiastic		3	8		50

9. The teacher is:

Letter Grade df = 16; x^2 = 347.1	A	B	C	D	F
Response Percentages:					
Very well prepared for class	39	33	34	50	50
Well prepared for class	43	40	38	8	
Adequately prepared for class	7	22	22	33	50
Inadequately prepared for class	11	5	5	8	
Completely unprepared for class			1		

10. The teacher:

Letter Grade df = 16; x^2 = 328.2	A	B	C	D	F
Response Percentages:					
Has a wide and varied presentation of course material and brings in his own experiences	41	26	27	42	100
Varies the presentation of the course material and brings in his own experiences	33	40	47	25	
Varies the presentation of the same material slightly	15	21	9	8	
Continually presents the same material but brings in a few of his own experiences		7	2		
Continually presents the same material in the same way	11	6	14	25	

11. What presently is the subject that you dislike the most?

Letter Grade df = 36; x^2 = 1713.2	A	B	C	D	F
Response Percentages:					
English	28	26	29	12	
Social Studies	21	12	12	29	
Foreign Language	20	27	20	6	
Music		.5	1	12	
Math	23	24	30	6	100
Business		1	2	6	
Science	5	7	5	29	
Industrial Arts	2	.2			
Arts		.2	.6		
Home Ec.		1	.6		

Phase df = 36; x^2 = 1233.7	3	4	5
Response Percentages:			
English	29	26	27
Social Studies	20	11	10
Foreign Language	17	28	18
Music	3	.2	
Math	23	24	34
Business	.6	2	3
Science	7	7	7
Industrial Arts		.5	
Arts	1		
Home Ec.	.6	1	

Year Graduate df = 27; x^2 = 479.9	70	69	68	67
Response Percentages:				
English	23	23	31	32
Social Studies	12	15	12	13
Foreign Language	29	32	17	17
Music	2	1		
Math	25	21	31	24
Business	1		2	3
Science	7	7	7	7
Industrial Arts				1
Arts				1
Home Ec.		1		

12. The content of the subject that I most dislike is:

Letter Grade df = 16; x^2 = 544.6	A	B	C	D	F
Response Percentages:					
Very interesting	4	4	6	13	
Quite interesting	20	19	13		
Slightly interesting	25	32	27	13	
Slightly boring	35	27	19	40	
Very boring	16	18	34	47	100

Year Graduate df = 12; x^2 = 44.2	70	69	68	67
Response Percentages:				
Very interesting	4	4	3	6
Quite interesting	14	14	22	21
Slightly interesting	28	34	32	26
Slightly boring	27	23	26	25
Very boring	26	25	16	21

13. The teacher is:

Letter Grade df = 16; x^2 = 636.6	A	B	C	D	F
Response Percentages:					
Highly enthusiastic	16	18	17	29	
Quite enthusiastic	38	39	39	29	
Slightly enthusiastic	31	31	30	18	
Not enthusiastic	15	10	10	24	

14. The teacher is:

Letter Grade df = 16; x^2 = 643.1	A	B	C	D	F
Response Percentages:					
Very well prepared for class	21	21	24	47	
Well prepared for class	26	36	34	29	
Adequately prepared for class	43	33	29	18	
Inadequately prepared for class	8	9	8	6	
Completely unprepared for class	2	1	4		100

15. The teacher:

Letter Grade df = 16; x^2 = 535.8	A	B	C	D	F
Response Percentages:					
Has a wide and varied presentation of course material and brings in his own experiences	18	13	14	12	
Varies the presentation of the course material and brings in his own experiences	25	28	28	24	
Varies the presentation of the same material slightly	20	28	25	24	
Continually presents the same material but brings in a few of his own experiences	9	10	11	6	
Continually presents the same material in the same way	27	21	21	35	100

Year Graduate df = 12; x^2 = 39.9	70	69	68	67
Response Percentages:				
Has a wide and varied presentation of course material and brings in his own experiences	14	13	9	18
Varies the presentation of the course material and brings in his own experiences	23	28	35	26
Varies the presentation of the same material slightly	30	25	25	26
Continually presents the same material but brings in a few of his own experiences	9	12	9	11
Continually presents the same material in the same way	22	22	22	19

16. In what subject do you presently get your poorest grade?

Letter Grade df = 36; x^2 = 1664.9	A	B	C	D	F
Response Percentages:					
English	32	24	23	24	
Social Studies	16	15	13	6	
Foreign Language	25	26	26	18	
Music		.7	.6	6	
Math	18	25	27	12	100
Business	2	2	2	12	
Science	7	7	7	24	
Industrial Arts		.2			
Arts			.6		
Home Ec.		.2	.6		

Phase df = 36; x^2 = 1225.2	3	4	5
Response Percentages:			
English	27	24	21
Social Studies	19	13	7
Foreign Language	22	28	16
Music	1	.2	3
Math	20	24	42
Business	.6	2	1
Science	10	7	9
Industrial Arts		.2	
Arts		.2	
Home Ec.	.6	.2	

Year Graduate df = 27; x^2 = 489.8	70	69	68	67
Response Percentages:				
English	23	23	24	26
Social Studies	17	10	16	13
Foreign Language	28	36	13	23
Music	1			1
Math	23	19	35	24
Business	1	1	3	2
Science	4	9	9	8
Industrial Arts				
Arts				
Home Ec.				

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17. The content of the subject in which I get my poorest grades is:

Letter Grade df = 16; x^2 = 277.3	A	B	C	D	F
Response Percentages:					
Very interesting	25	16	6	10	
Quite interesting	45	28	36	50	50
Slightly interesting	10	32	21	10	
Slightly boring	15	15	13	20	
Very boring	5	9	24	10	50

18. The teacher is:

Letter Grade df = 16; x^2 = 297.5	A	B	C	D	F
Response Percentages:					
Highly enthusiastic	26	28	18	40	
Quite enthusiastic	37	44	39	30	
Slightly enthusiastic	37	20	24	10	
Not enthusiastic		5	17	20	

19. The teacher is:

Letter Grade df = 16; x^2 = 284.5	A	B	C	D	F
Response Percentages:					
Very well prepared for class	28	31	28	30	50
Well prepared for class	38	35	35	40	
Adequately prepared for class	14	27	25	20	
Inadequately prepared for class	19	5	9		50
Completely unprepared for class		1	2	10	

20. The teacher:

Letter Grade df = 16; x^2 = 251.1	A	B	C	D	F
Response Percentages:					
Has a wide and varied presentation of course material and brings in his own experiences	21	22	19	20	
Varies the presentation of the course material and brings in his own experiences	31	39	32	30	
Varies the presentation of the same material but slightly	31	20	21		
Continually presents the same material but brings in a few of his own experiences	5	9	9	40	
Continually presents the same course material in the same way	11	9	18	10	100

Year Graduate df = 12; x^2 = 33.0	70	69	68	67
Response Percentages:				
Has a wide and varied presentation of course material and brings in his own experiences	19	17	17	34
Varies the presentation of the course material and brings in his own experiences	30	48	42	24
Varies the presentation of the same material but slightly	17	18	19	29
Continually presents the same material but brings in a few of his own experiences	15	11	7	7
Continually presents the same course material in the same way	20	6	15	7

Objective 3

To allow individual students to pursue their studies at rates commensurate with their individual abilities.*

	Letter Grade	Phase	Year Grad.
Self-rating of academic achievement	x	x	

Objective 3 - Percentage Response Category Tables

21. How well are you doing in school?

Letter Grade df = 16; x^2 = 804.5	A	B	C	D	F
Response Percentages:					
Very well	38	.09	.04	11	50
Above average	55.3	48	.19		50
Average	.7	40	63	58	
Below average		.02	10	23	
Poorly		.002	3	8	

Phase df = 16; x^2 = 125.1	3	4	5
Response Percentages:			
Very well	4	10	33
Above average	22	45	59
Average	61	42	6
Below average	10	2	
Poorly	2	.5	1

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* "x" denotes significance ($p < .05$)

Objective 4

To provide a curriculum that allows recognition of the values in experiences other than those gained in a formal classroom situation (work-study programs, etc.).

	Letter Grade	Phase	Year Grad.
Relationship of favorite subject to hobbies	x		x
Immediately usable information supplied by favorite subject	x		
Relationship of best grade subject to hobbies	x		x
Immediately usable information supplied by best grade subject	x		
Relationship of most disliked subject to hobbies	x		x
Immediately usable information supplied by subject most dislike	x		
Relationship of poorest grade subject to hobbies	x		x
Immediately usable information supplied by poorest grade subject	x		
Amount of time spent at job outside home during school year	x	x	x

"x" denotes significance ($p < .05$)

Objective 4 - Percentage Response Category Tables

22. The relationship of my favorite subject to my hobbies is:

Letter Grade df = 16; x^2 = 530.3	A	B	C	D	F
Response Percentages:					
Highly relevant	10	12	9	5	50
Quite relevant	17	16	21	29	
Slightly relevant	30	29	29	17	
Slightly irrelevant	14	16	13	23	
Highly irrelevant	26	24.9	26	23	50

Year Graduate df = 12; x^2 = 50.2	70	69	68	67
Response Percentages:				
Highly relevant	11	11	9	17
Quite relevant	17	19	15	21
Slightly relevant	33	26	29	28
Slightly irrelevant	13	18	17	15
Highly irrelevant	26	26	30	19

23. Your favorite subject offers information which you may use immediately:

Letter Grade df = 16; x^2 = 652.6	A	B	C	D	F
Response Percentages:					
Always	23	20	16	29	50
Frequently	43	36	36	23	50
Sometimes	25	35	33	41	
Infrequently	3	6	9	5	
Never	3	1	3		

24. The relationship of the subject in which I get the best grades to my hobbies is:

Letter Grade df = 16; x^2 = 268.3	A	B	C	D	F
Response Percentages:					
Highly relevant	11	8	4	8	
Quite relevant	18	21	19	8	
Slightly relevant	25	21	26	33	
Slightly irrelevant	22	23	15	16	
Highly irrelevant	22	25	33	33	100

Year Graduate df = 12; x^2 = 29.2	70	69	68	67
Response Percentages:				
Highly relevant	8	9	7	8
Quite relevant	23	18	16	23
Slightly relevant	24	20	28	23
Slightly irrelevant	18	20	28	20
Highly irrelevant	27	33	22	26

25. The subject in which you get your best grades offers information which you may use immediately:

Letter Grade df = 16; x^2 = 333.9	A	B	C	D	F
Response Percentages:					
Always	7	22	19	16	
Frequently	59	27	34	41	
Sometimes	25	36	34	33	50
Infrequently	7	12	8	8	
Never		1	3		50

26. The relationship of the subject that I most dislike to my hobbies is:

Letter Grade df = 16; x^2 = 439.9	A	B	C	D	F
Response Percentages:					
Highly relevant	2	1	7	12	
Quite relevant	7	5	7	12	
Slightly relevant	14	17	14		
Slightly irrelevant	21	22	18	18	
Highly irrelevant	54	54	53	59	

Year Graduate df = 12; x^2 = 139.5	70	69	68	67
Response Percentages:				
Highly relevant	6	4		1
Quite relevant	6	6	5	8
Slightly relevant	13	16	18	18
Slightly irrelevant	19	22	23	17
Highly irrelevant	56	52	52	55

27. Your most disliked subject offers information which you can use immediately:

Letter Grade df = 16; x^2 = 613.6	A	B	C	D	F
Response Percentages:					
Always	9	11	10	5	
Frequently	31	19	23	23	
Sometimes	26	38	41	29	
Infrequently	24	26	13	35	
Never	9	6	12	5	100

28. The relationship of the subject in which I get my poorest grades to my hobbies is:

Letter Grade df = 16; x^2 = 203.3	A	B	C	D	F
Response Percentages:					
Highly relevant		6	9		
Quite relevant	21	8	9	10	
Slightly relevant	21	26	20	40	
Slightly irrelevant	37	24	15	10	
Highly irrelevant	21	36	46	40	100

Year Graduate df = 12; x^2 = 42.2	70	69	68	67
Response Percentages:				
Highly relevant	5	6	8	5
Quite relevant	9	7	9	10
Slightly relevant	22	25	15	36
Slightly irrelevant	18	26	22	20
Highly irrelevant	45	34	44	29

29. The subject in which you get your poorest grades offers information which you may use immediately:

Letter Grade df = 16; x^2 = 259.9	A	B	C	D	F
Response Percentages:					
Always	28	14	18	20	
Frequently	11	27	30	20	100
Sometimes	39	35	27	20	
Infrequently	22	19	19	30	
Never		5	5	10	

30. During the school year, how much time do you spend at some job each week outside of the home?

Letter Grade df = 16; $x^2 = 596.7$	A	B	C	D	F
Response Percentages:					
0 - 2 hrs.	45	45	32	20	
3 - 5 hrs.	30	22	19	13	
6 - 9 hrs.	7	13	15	27	
10 - 19 hrs.	16	9	13	27	
20 or more	2	10	21	13	100

Phase df = 16; $x^2 = 44.4$	3	4	5
Response Percentages:			
0 - 2 hrs.	36	40	60
3 - 5 hrs.	17	24	21
6 - 9 hrs.	18	14	13
10 - 19 hrs.	9	12	5
20 or more	24	10	2

Year Graduate df = 12; $x^2 = 63.9$	70	69	68	67
Response Percentages				
0 - 2 hrs.	50	43	39	30
3 - 5 hrs.	27	23	19	17
6 - 9 hrs.	6	18	16	13
10 - 19 hrs.	10	7	11	17
20 or more	6	9	14	23

Objective 6

To grant each pupil a major share of the responsibility for directing his own educational program.

	Letter Grade	Phase	Year Grad.
Relationship of best grade subject to future goals	x		
Relationship of most disliked subject to future goals	x		x
Relationship of poorest grade subject to future goals	x		x
Importance of good grades for student personally	x		x
Individual(s) responsible for final choice in courses	x	x	x

"x" denotes significance ($p < .05$)

Objective 6 - Percentage Response Category Tables

31. The relationship of the subject in which I get the best grades to my future goals is:

Letter Grade df = 16; x^2 = 302.9	A	B	C	D	F
Response Percentages:					
Highly relevant	7	16	17	17	50
Quite relevant	41	25	33	25	
Slightly relevant	33	30	[illegible]7	42	
Slightly irrelevant	3	13	10	8	50
Highly irrelevant	15	14	12	8	

32. The relationship of the subject that I most dislike to my future goal is:

Letter Grade df = 16; x^2 = 516.8	A	B	C	D	F
Response Percentages:					
Highly relevant	2	6	12	24	
Quite relevant	15	16	18	6	
Slightly relevant	27	31	27	6	
Slightly irrelevant	22	19	14	18	
Highly irrelevant	35	28	30	47	100

Year Graduate df = 12; x^2 = 27.8	70	69	68	67
Response Percentages:				
Highly relevant	12	6	7	5
Quite relevant	19	12	22	11
Slightly relevant	25	31	28	31
Slightly irrelevant	15	23	14	18
Highly irrelevant	29	28	28	34

33. The relationship of the subject in which I get my poorest grades to my future goals is:

Letter Grade df = 16; x^2 = 232.3	A	B	C	D	F
Response Percentages:					
Highly relevant	22	13	20	10	
Quite relevant	28	23	22	50	
Slightly relevant	28	30	16	20	
Slightly irrelevant	17	15	16	20	
Highly irrelevant	6	18	26		100

Year Graduate df = 12; x^2 = 27.8	70	69	68	67
Response Percentages:				
Highly relevant	14	16	19	14
Quite relevant	30	25	28	13
Slightly relevant	19	25	19	41
Slightly irrelevant	16	18	10	15
Highly irrelevant	20	15	24	19

34. How important is it for you personally to get good grades?

Letter Grade df = 16; x^2 = 674.1	A	B	C	D	F
Response Percentages:					
It is extremely important to me	50	36	31	31	
It is very important to me	38	52	46	56	
It is slightly important to me	11	11	18	6	50
It is slightly unimportant to me	2	10	2	6	
It is unimportant to me		.02	2		50

Year Graduate df = 12; x^2 = 30.5	70	69	68	67
Response Percentages;				
It is extremely important to me	44	35	35	26
It is very important to me	43	53	50	51
It is slightly important to me	11	10	15	16
It is slightly unimportant to me		2		5
It is unimportant to me	2	1		

35. Who makes the final choice in what courses you are going to take?

Letter Grade df = 16; x^2 = 686.9	A	B	C	D	F
Response Percentages:					
My parents	4	9	15	18	
My teachers	2	3	2	6	
My friends		.009	2	6	50
Myself	95	86	74	65	50
The school		2	7	6	

Phase df = 16; x^2 = 51.1	3	4	5
Response Percentages:			
My parents	18	8	3
My teachers	4	2	
My friends	2	1	
Myself	69	87	97
The school	6	2	

Year Graduate df = 12; x^2 = 371.1	70	69	68	67
Response Percentages:				
My parents	16	14	5	6
My teachers	5	3	1	
My friends	2	2		
Myself	72	89	90	93
The school	6	4	2.5	1

Objective 7

To encourage each student to develop an inward desire to learn (as opposed to a desire based only on such outside pressures as adult approval, tests, grades, credits, and getting promoted to the next grade or school).

	Letter Grade	Phase	Year Grad.
Rating of contribution to success in favorite subject:			
Content of favorite subject	x		
Teacher attitude	x		
Teacher preparation	x		
Teacher presentation	x		
Relationship of favorite subject to hobbies	x		x
Relationship of favorite subject to future goals	x		
Family interest in favorite subject	x		
Subject offers immediately usable information	x		
Competition between students in favorite subject	x		
Ratings of contribution to success in best grade subject:			
Content of best grade subject	x		
Teacher attitude	x		
Teacher preparation	x		
Teacher presentation	x		
Relationship of best grade subject to hobbies	x		x
Relationship of best grade subject to future goals	x		
Family interest in best grade subject	x		
Subject offers immediately usable information	x		
Competition between students in best grade subject	x		
Rating of factors creating most disliked subject:			
Content of most disliked subject	x		x
Teacher attitude	x		
Teacher preparation	x		
Teacher presentation	x		x

	Letter Grade	Phase	Year Grad.
(Most disliked subject cont'd.)			
Relationship of most disliked subject to hobbies	x		x
Relationship of most disliked subject to future goals	x		x
Family interest in most disliked subject	x		x
Immediately usable information supplied by most disliked subject	x		
Competition between students in most disliked subject	x		x
Rating of factors involved in poorest grade subject:			
Content of poorest grade subject	x		
Teacher attitude	x		
Teacher preparation	x		
Teacher presentation	x		x
Relationship of poorest grade subject to hobbies	x		x
Relationship of poorest grade subject to future goals	x		x
Family interest in poorest grade subject	x		
Immediately usable information supplied by poorest grade subject	x		
Competition between students in poorest grade subject	x		
Importance of good grades for student personally	x		x
Personal satisfaction from working hard on studies	x		
Personal admiration for very bright students	x		
Importance to friends of good grades	x	x	
Average time spent each day:			
Math homework	x		
English homework	x	x	
Science homework	x		

	Letter Grade	Phase	Year Grad.
Average time spent each day (cont'd.):			
Social Studies homework	x		
Foreign Languages homework	x		
Average time spent watching TV each school week	x	x	x
If more work, then up-phase in:			
Math		x	x
English	x	x	x
Social Studies			
Science			x
Foreign Language			
Average time spent per week on non-required reading in:			
History	x		
Social Studies	x		
English	x		
Science	x		

"x" denotes significance ($p < .05$)

Objective 7 - Percentage Response Category Tables

Rate the following according to how much they contribute to your success in your favorite subject.

2. The content of my favorite subject is:

Letter Grade df = 16; x^2 = 672.8	A	B	C	D	F
Response Percentages:					
Very interesting	38	40	39	35	
Quite interesting	53	47	46	41	50
Slightly interesting	7	10	10	6	
Slightly boring	2	2	2	18	
Very boring		.5	2		50

3. The teacher is:

Letter Grade df = 16; x^2 = 678.1	A	B	C	D	F
Response Percentages:					
Highly enthusiastic	52	38	38	50	50
Quite enthusiastic	38	48	43	38	
Slightly enthusiastic	7	11	14	6	
Not enthusiastic	3	2	5	6	50

4. The teacher is:

Letter Grade df = 16; x^2 = 661.1	A	B	C	D	F
Response Percentages:					
Very well prepared for class	53	41	44	50	100
Well prepared for class	25	39	39	38	
Adequately prepared for class	16	16	13	13	
Inadequately prepared for class	5	4	4		
Completely unprepared for class		.7			

5. The teacher:

Letter Grade df = 16; x^2 = 624.9	A	B	C	D	F
Response Percentages:					
Has a wide and varied presentation of course material and brings in his own experiences	41	36	37	35	
Varies the presentation of the course material and uses personal experiences	39	42	42	47	
Varies the presentation of the same material slightly	13	11	10	18	
Continually presents the same material but brings in a few of his own experiences	2	5	5		
Continually presents the same course material in the same way	5	5	5	6	100

22. The relationship of my favorite subject to my hobbies is:

Letter Grade df = 16; x^2 = 530.3	A	B	C	D	F
Response Percentages:					
Highly relevant	10	12	9	5	50
Quite relevant	17	16	21	29	
Slightly relevant	30	29	29	17	
Slightly irrelevant	14	16	13	23	
Highly irrelevant	26	24.9	26	23	50

Year Graduate df = 12; x^2 = 50.2	70	69	68	67
Response Percentages:				
Highly relevant	11	11	9	17
Quite relevant	17	19	15	21
Slightly relevant	33	26	29	28
Slightly irrelevant	13	18	17	15
Highly irrelevant	26	26	30	19

31. The relationship of my favorite subject to my future goals is:

Letter Grade df = 16; x^2 = 609.5	A	B	C	D	F
Response Percentages:					
Highly relevant	39	28	27	12	50
Quite relevant	30	28	28	29	
Slightly relevant	21	26	21	24	
Slightly irrelevant	7	9	14	12	
Highly irrelevant	2	9	10	24	50

36. My family:

Letter Grade df = 16; x^2 = 618.9	A	B	C	D	F
Response Percentages:					
Shows great interest in my favorite subject as compared to other subjects	22	12	14	12	
Shows much interest in my favorite subject as compared to other subjects	22	27	21	24	100
Shows some interest in my favorite subject as compared to other subjects	51	39	33	29	
Shows little interest in my favorite subject as compared to other subjects	4	16	18	18	
Shows no interest in my favorite subject as compared to other subjects	2	6	14	18	

23. Your favorite subject offers information which you may use immediately:

Letter Grade df = 16; x^2 = 652.6	A	B	C	D	F
Response Percentages:					
Always	23	20	16	29	50
Frequently	43	36	36	23	50
Sometimes	25	35	33	41	
Infrequently	3	6	9	5	
Never	3	1	3		

37. Students within my favorite subject are:

Letter Grade df = 16; x^2 = 629.3	A	B	C	D	F
Response Percentages:					
Highly competitive within the classroom	16	16	12	12	50
Quite competitive within the classroom	38	36	33	35	
Somewhat competitive within the classroom	36	38	40	29	
Slightly non-competitive within the classroom	7	6	8	18	
Highly non-competitive within the classroom	2	4	7	6	50

7. The content of the subject in which I get my best grades is:

Letter Grade df = 16; x^2 = 354.5	A	B	C	D	F
Response Percentages:					
Very interesting	19	24	22	50	50
Quite interesting	39	44	35	17	
Slightly interesting	32	20	26	17	
Slightly boring	6	8	9	17	50
Very boring	6	5	8		

8. The teacher is:

Letter Grade df = 16; x^2 = 636.6	A	B	C	D	F
Response Percentages:					
Highly enthusiastic	34	32	24	17	50
Quite enthusiastic	38	47	45	50	
Slightly enthusiastic	28	16	20	17	
Not enthusiastic		3	8		50

10. The teacher:

Letter Grade df = 16; x^2 = 347.1	A	B	C	D	F
Response Percentages:					
Has a wide and varied presentation of course material and brings in his own experiences	41	26	27	42	100
Varies the presentation of the course material and brings in his own experiences	33	40	47	25	
Varies the presentation of the same material slightly	15	21	9	8	
Continually presents the same material but brings in a few of his own experiences		7	2		
Continually presents the same material in the same way	11	6	14	25	

9. The teacher is:

Letter Grade df = 16; x^2 = 347.1	A	B	C	D	F
Response Percentages:					
Very well prepared for class	39	33	34	50	50
Well prepared for class	43	40	38	8	
Adequately prepared for class	7	22	22	33	50
Inadequately prepared for class	11	5	5	8	
Completely unprepared for class			1		

24. The relationship of the subject in which I get the best grades to my hobbies is:

Letter Grade df = 16; x^2 = 268.3	A	B	C	D	F
Response Percentages:					
Highly relevant	11	8	4	8	
Quite relevant	18	21	19	8	
Slightly relevant	25	21	26	33	
Slightly irrelevant	22	23	15	16	
Highly irrelevant	22	25	33	33	100

Year Graduate df = 12; x^2 = 29.2	70	69	68	67
Response Percentages:				
Highly relevant	8	9	7	8
Quite relevant	23	18	16	23
Slightly relevant	24	20	28	23
Slightly irrelevant	18	20	28	20
Highly irrelevant	27	33	22	26

31. The relationship of the subject in which I get the best grades to my future goals is:

Letter Grade df = 16; x^2 = 302.9	A	B	C	D	F
Response Percentages:					
Highly relevant	7	16	17	17	50
Quite relevant	41	25	33	25	
Slightly relevant	33	30	27	42	
Slightly irrelevant	3	13	10	8	50
Highly irrelevant	15	14	12	8	

38. My family:

Letter Grade df = 16; x^2 = 335.3	A	B	C	D	F
Response Percentages:					
Shows great interest in this subject as compared to others	15	6	17	25	50
Shows much interest in this subject as compared to others	30	23	23	17	
Shows some interest in this subject as compared to others	41	47	29	50	
Shows little interest in this subject as compared to others	11	19	21	8	
Shows no interest in this subject as compared to others	3	4	11		50

25. The subject in which you get your best grades offers information which you may use immediately:

Letter Grade df = 16; x^2 = 333.9	A	B	C	D	F
Response Percentages:					
Always	7	22	19	16	
Frequently	59	27	34	41	
Sometimes	25	36	34	33	50
Infrequently	7	12	8	8	
Never		1	3		50

39. Students within the subject in which I get my best grades are:

Letter Grade df = 16; x^2 = 319.1	A	B	C	D	F
Response Percentages:					
Highly competitive within that classroom	12	12	16	17	
Quite competitive within the classroom	31	39	35	25	50
Slightly competitive within the classroom	46	35	34	33	
Slightly non-competitive within the classroom	3	11	10	17	
Highly non-competitive within the classroom	8	3	6	8	50

12. The content of the subject that I most dislike is:

Letter Grade df = 16; x^2 = 544.6	A	B	C	D	F
Response Percentages:					
Very interesting	4	4	6	13	
Quite interesting	20	19	13		
Slightly interesting	25	32	27	13	
Slightly boring	35	27	19	40	
Very boring	16	18	34	47	100

Year Graduate df = 12; x^2 = 44.2	70	69	68	67
Response Percentages:				
Very interesting	4	4	3	6
Quite interesting	14	14	22	21
Slightly interesting	28	34	32	26
Slightly boring	27	23	26	25
Very boring	26	25	16	21

13. The teacher is:

Letter Grade df = 16; x^2 = 636.6	A	B	C	D	F
Response Percentages:					
Highly enthusiastic	16	18	17	29	
Quite enthusiastic	38	39	39	29	
Slightly enthusiastic	31	31	30	18	
Not enthusiastic	15	10	10	24	

14. The teacher is:

Letter Grade df = 16; x^2 = 643.1	A	B	C	D	F
Response Percentages:					
Very well prepared for class	21	21	24	47	
Well prepared for class	26	36	34	29	
Adequately prepared for class	43	33	29	18	
Inadequately prepared for class	8	9	8	6	
Completely unprepared for class	2	1	4		100

15. The teacher:

Year Graduate df = 12; x^2 = 39.9	70	69	68	67
Response Percentages:				
Has a wide and varied presentation of course material and brings in his own experiences	14	13	9	18
Varies the presentation of the course material and brings in his own experiences	23	28	35	26
Varies the presentation of the same material slightly	30	25	25	26
Continually presents the same material but brings in a few of his own experiences	9	12	9	11
Continually presents the same material in the same way	22	22	22	19

15. The teacher: (cont'd)

Letter Grade df = 16; x^2 = 535.8	A	B	C	D	F
Response Percentages:					
Has a wide and varied presentation of course material and brings in his own experiences	18	13	14	12	
Varies the presentation of the course material and brings in his own experiences	25	28	28	24	
Varies the presentation of the same material slightly	20	28	25	24	
Continually presents the same material but brings in a few of his own experiences	9	10	11	6	
Continually presents the same material in the same way	27	21	21	35	100

26. The relationship of the subject that I most dislike to my hobbies is:

Letter Grade df = 16; x^2 = 439.9	A	B	C	D	F
Response Percentages:					
Highly relevant	2	1	7	12	
Quite relevant	7	5	7	12	
Slightly relevant	14	17	14		
Slightly irrelevant	21	22	18	18	
Highly irrelevant	54	54	53	59	

Year Graduate df = 12; x^2 = 139.5	70	69	68	67
Response Percentages:				
Highly relevant	6	4		1
Quite relevant	6	6	5	8
Slightly relevant	13	16	18	18
Slightly irrelevant	19	22	23	17
Highly irrelevant	56	52	52	55

32. The relationship of the subject that I most dislike to my future goal is:

Letter Grade df = 16; $x^2 = 516.8$	A	B	C	D	F
Response Percentages:					
Highly relevant	2	6	12	24	
Quite relevant	15	16	18	6	
Slightly relevant	27	31	27	6	
Slightly irrelevant	22	19	14	18	
Highly irrelevant	35	28	30	47	100

Year Graduate df = 12; $x^2 = 69.8$	70	69	68	67
Response Percentages:				
Highly relevant	12	6	7	5
Quite relevant	19	12	22	11
Slightly relevant	25	31	28	31
Slightly irrelevant	15	23	14	18
Highly irrelevant	29	28	28	34

40. My family:

Letter Grade df = 16; $x^2 = 608.8$	A	B	C	D	F
Response Percentages:					
Shows great interest in my disliked subject as compared to others	10	8	15	35	
Shows much interest in this subject as compared to others	31	22	20	29	100
Shows some interest in this subject as compared to others	42	40	33	12	
Shows little interest in this subject as compared to others	12	22	17	6	
Shows no interest in this subject as compared to others	5	7	16	18	

Year Graduate df = 12; x^2 = 32.1	70	69	68	67
Response Percentages:				
Shows great interest in my disliked subject as compared to others	16	11	8	6
Shows much interest in this subject as compared to others	28	25	16	19
Shows some interest in this subject as compared to others	34	36	44	37
Shows little interest in this subject as compared to others	15	18	23	22
Shows no interest in this subject as compared to others	7	9	10	14

27. Your most disliked subject offers information that you can use immediately:

Letter Grade df = 16; x^2 = 613.6	A	B	C	D	F
Response Percentages:					
Always	9	11	10	5	
Frequently	31	19	23	23	
Sometimes	26	38	41	29	
Infrequently	24	26	13	35	
Never	9	6	12	5	100

41. Students within my disliked subject are:

Letter Grade df = 16; x^2 = 598.0	A	B	C	D	F
Response Percentages;					
Highly competitive within the classroom	9	11	9	12	
Quite competitive within the classroom	15	26	20	29	
Somewhat competitive within the classroom	45	38	39	29	
Slightly non-competitive within the classroom	18	19	19	24	
Highly non-competitive within the classroom	13	7	13	6	

Year Graduate df = 12; x^2 = 26.3	70	69	68	67
Response Percentages:				
Highly competitive within the classroom	14	8	9	9
Quite competitive within the classroom	20	27	30	18
Somewhat competitive within the classroom	39	35	38	43
Slightly non-competitive within the classroom	20	16	19	21
Highly non-competitive within the classroom	7	13	5	10

17. The content of the subject in which I get my poorest grades is:

Letter Grade df = 16; x^2 = 277.3	A	B	C	D	F
Response Percentages:					
Very interesting	25	16	6	10	
Quite interesting	45	28	36	50	50
Slightly interesting	10	32	21	10	
Slightly boring	15	15	13	20	
Very boring	5	9	24	10	50

18. The teacher is:

Letter Grade df = 16; x^2 = 297,5	A	B	C	D	F
Response Percentages:					
Highly enthusiastic	26	28	18	40	
Quite enthusiastic	37	44	39	30	
Slightly enthusiastic	37	20	24	10	
Not enthusiastic		5	17	20	

19. The teacher is:

Letter Grade df = 16; x^2 = 284.5	A	B	C	D	F
Response Percentages:					
Very well prepared for class	28	31	28	30	50
Well prepared for class	38	35	35	40	
Adequately prepared for class	14	27	25	20	
Inadequately prepared for class	19	5	9		50
Completely unprepared for class		1	2	10	

20. The teacher:

Letter Grade df = 16; x^2 = 251.1	A	B	C	D	F
Response Percentages:					
Has a wide and varied presentation of course material and brings in his own experiences	21	22	19	20	
Varies the presentation of the course material and brings in his own experiences	31	39	32	30	
Varies the presentation of the same material but slightly	31	20	21		
Continually presents the same material but brings in a few of his own experiences	5	9	9	40	
Continually presents the same material in the same way	11	9	18	10	100

Year Graduate df = 12; x^2= 33.0	70	69	68	67
Response Percentages:				
Has a wide and varied presentation of course material and brings in his own experiences	19	17	17	34
Varies the presentation of the course material and brings in his own experiences	30	48	42	24
Varies the presentation of the same material but slightly	17	18	19	29
Continually presents the same material but brings in a few of his own experiences	15	11	7	7
Continually presents the same material in the same way	20	6	15	7

28. The relationship of the subject in which I get my poorest grades to my hobbies is:

Letter Grade df = 16; x^2 = 203.3	A	B	C	D	F
Response Percentages:					
Highly relevant		6	9		
Quite relevant	21	8	9	10	
Slightly relevant	21	26	20	40	
Slightly irrelevant	37	24	15	10	
Highly irrelevant	21	36	46	40	100

Year Graduate df = 12; x^2 = 42.2	70	69	68	67
Response Percentages:				
Highly relevant	5	6	8	5
Quite relevant	9	7	9	10
Slightly relevant	22	25	15	36
Slightly irrelevant	18	26	22	20
Highly irrelevant	45	34	44	29

33. The relationship of the subject in which I get my poorest grades to my future goals is:

Letter Grade df = 16; x^2 = 232.3	A	B	C	D	F
Response Percentages:					
Highly relevant	22	13	20	10	
Quite relevant	28	23	22	50	
Slightly relevant	28	30	16	20	
Slightly irrelevant	17	15	16	20	
Highly irrelevant	6	18	26		100

Year Graduate df = 12; x^2 = 27.8	70	69	68	67
Response Percentages:				
Highly relevant	14	16	19	14
Quite relevant	30	25	28	13
Slightly relevant	19	25	19	41
Slightly irrelevant	16	18	10	15
Highly irrelevant	20	15	24	19

42. My family:

Letter Grade df = 16; x^2 = 255.9	A	B	C	D	F
Response Percentages:					
Shows great interest in the subject which I get my poorest grades as compared to others	21	12	14	20	
Shows much interest in this subject as compared to others	42	26	26	40	100
Shows some interest in this subject as compared to others	32	43	30	40	
Shows little interest in this subject as compared to others	5	13	16		
Shows no interest in this subject as compared to others		6	13		

29. The subject in which you get your poorest grades offers information which you may use immediately:

Letter Grade df = 16; x^2 = 259.9	A	B	C	D	F
Response Percentages:					
Always	28	14	18	20	
Frequently	11	27	30	20	100
Sometimes	39	35	27	20	
Infrequently	22	19	19	30	
Never		5	5	10	

43. Students within the subject in which I get my poorest grades are:

Letter Grade df = 16; x^2 = 261.1	A	B	C	D	F
Response Percentages:					
Highly competitive within the classroom	17	16	11	30	
Quite competitive within the classroom	44	33	29	50	100
Somewhat competitive within the classroom	39	33	36	20	
Slightly non-competitive within the classroom		16	9		
Highly non-competitive within the classroom		4	16		

34. How important is it for you personally to get good grades?

Letter Grade df = 16; x^2 = 674.1	A	B	C	D	F
Response Percentages:					
It is extremely important to me	50	36	31	31	
It is very important to me	38	52	46	56	
It is slightly important to me	11	11	18	6	50
It is slightly unimportant to me	2	10	2	6	
It is extremely unimportant to me		.2	2		50

Year Graduate df = 12; x^2 = 30.5	70	69	68	67
Response Percentages:				
It is extremely important to me	44	35	35	26
It is very important to me	43	53	50	51
It is slightly important to me	11	10	15	16
It is slightly unimportant to me		2		5
It is extremely unimportant to me	2	1		

44. How satisfying is it to you personally to work hard on studies?

Letter Grade df = 16; x^2 = 661.4	A	B	C	D	F
Response Percentages:					
It is extremely satisfying	11	14	12	12	
It is very satisfying	64	47	35	29	50
It is slightly satisfying	16	29	37	53	
It is slightly unpleasant	5	7	12	6	50
It is extremely unpleasant	4	3	5		

45. How much do you personally admire students who are very bright in school?

Letter Grade df = 16; x^2 = 656.1	A	B	C	D	F
Response Percentages:					
I admire them very much	44	27	28	24	50
I admire them some	49	46	36	35	50
I admire them a little	7	20	23	24	
I don't admire them at all			5	12	

46. How important is it for your friends to get good grades?

Letter Grade df = 16; x^2 = 638.5	A	B	C	D	F
Response Percentages:					
It is extremely important	36	27	23	19	50
It is slightly important	36	44	37	63	50
It is neither important or unimportant	20	25	30	13	
It is slightly unimportant	4	2	2		
It is extremely unimportant	2	4	8	6	

Phase df = 16; x^2 = 42.9	3	4	5
Response Percentages:			
It is extremely important	22	26	39
It is slightly important	36	46	33
It is neither important or unimportant	29	24	22
It is slightly unimportant	5	1	
It is extremely unimportant	7	3	6

47. How much time on the average do you spend doing homework in Mathematics? (per day)

Letter Grade df = 16; x^2 = 649.7	A	B	C	D	F
Response Percentages:					
None to half an hour	48	54	58	33	50
One half to one hour	47	36	34	27	50
One to two hours	5	8	6	27	
Two to three hours		2	1	7	
Three or more hours			2	7	

48. How much time on the average do you spend doing homework in English? (per day)

Letter Grade df = 16; x^2 = 677.3	A	B	C	D	F
Response Percentages:					
None to half an hour	13	30	44	24	
One half to one hour	54	47	38	47	50
One to two hours	30	20	15	18	50
Two to three hours	4	2	2	6	
Three or more hours		1	1	6	

Phase df = 16; x^2 = 65.2	3	4	5
Response Percentages:			
None to half an hour	37	31	21
One half to one hour	40	48	46
One to two hours	19	18	31
Two to three hours	3	2	1
Three or more hours	.6	.2	

49. How much time on the average do you spend doing homework in Science? (per day)

Letter Grade df = 16; x^2 = 603.1	A	B	C	D	F
Response Percentages:					
None to half an hour	59	61	61	47	
One half to one hour	33	32	30	33	50
One to two hours	7	6	8	13	50
Two to three hours		1	1		
Three or more hours			.1	7	

50. How much time on the average do you spend doing homework in Social Studies? (per day)

Letter Grade df = 16; x^2 = 640.5	A	B	C	D	F
Response Percentages:					
None to half an hour	44	52	55	6	
One half to one hour	38	36	27	50	50
One to two hours	4	9	16	38	
Two to three hours	2	2	.3	6	
Three or more hours			.7		50

51. How much time on the average do you spend doing homework in Foreign Languages? (per day)

Letter Grade df = 16; x^2 = 658.2	A	B	C	D	F
Response Percentages:					
None to half an hour	54	52	58	58	
One half to one hour	38	34	29	17	
One to two hours	8	13	10	17	
Two to three hours		1	3		100
Three or more hours				9	

52. About how much time on the average do you watch TV during the school week? (per day)

Letter Grade df = 16; x^2 = 557.4	A	B	C	D	F
Response Percentages:					
About 4 or more hours	7	9	23	35	
About 3 hours	8	11	13	18	
About 2 hours	16	26	27	24	100
Less than 1 hour	30	27	18	18	
None or almost none	38	29	18	6	

Phase df = 16; x^2 = 76.4	3	4	5
Response Percentages:			
About 4 or more hours	23	10	3
About 3 hours	19	10	3
About 2 hours	28	25	20
Less than 1 hour	17	26	29
None or almost none	13	28	45

Year Graduate df = 12; x^2 = 75.8	70	69	68	67
Response Percentages:				
About 4 or more hours	19	14	9	9
About 3 hours	12	13	13	8
About 2 hours	31	28	22	19
Less than 1 hour	20	22	22	32
None or almost none	18	23	34	31

53. If you worked harder, do you feel that you could move up a phase in Mathematics?

Year Graduate df = 6; $x^2 = 99.7$	70	69	68	67
Response Percentages:				
Yes	49	55	30	28
No	47	42	64	43
I am not presently taking a Mathematics course	4	3	6	29

54. If you worked harder, do you feel that you could move up a phase in English?

Phase df = 8; $x^2 = 50.3$	3	4	5
Response Percentages:			
Yes	54	46	23
No	41	53	77
I am not presently taking an English course	3	.5	

Year Graduate df = 6; $x^2 = 19.6$	70	69	68	67
Response Percentages:				
Yes	39	50	38	57
No	57	59	60	43
I am not presently taking an English course	3	.5	2	

Letter Grade df = 8; $x^2 = 50.6$	A	B	C	D	F
Response Percentages:					
Yes	38	44	54	47	
No	63	55	42	47	50
I am not presently taking an English course		.9	2		50

55. If you worked harder, do you feel that you could move up a phase in Social Studies?

Yes
No
I am not presently taking a Social Studies course.

56. If you worked harder, do you feel that you could move up a phase in Science?

Yes
No
I am not presently taking a Science course.

57. If you worked harder, do you feel that you could move up a phase in Foreign Languages?

Year Graduate df = 6; x^2 = 85.5	70	69	68	67
Response Percentages:				
Yes	34	36	28	18
No	46	54	44	28
I am not presently taking a Foreign Language course	16	9	28	51

58. On the average, how much non-required reading do you do in History? (per week)

Letter Grade df = 16; x^2 = 616.3	A	B	C	D	F
Response Percentages:					
None to two hours	86	83	76	44	100
Three hours	6	12	10	13	
Four hours	4	2	5	25	
Five hours			4	6	
More than five hours	4	1	6	13	

59. On the average, how much non-required reading do you do in Social Studies? (per week)

Letter Grade df = 16; x^2 = 589.6	A	B	C	D	F
Response Percentages:					
None to two hours	95	87	85	50	100
Three hours	5	7	3	21	
Four hours		3	5	29	
Five hours		1	2		
More than five hours		2	5		

60. On the average, how much non-required reading do you do in English? (per week)

Letter Grade df = 16; x^2 = 593.8	A	B	C	D	F
Response Percentages:					
None to two hours	57	58	66	50	100
Three hours	21	20	18	25	
Four hours	9	10	7	6	
Five hours	5	5	2	19	
More than five hours	6	8	7		

61. On the average, how much non-required reading do you do in Science? (per week)

Letter Grade df = 16; x^2 = 617.2	A	B	C	D	F
Response Percentages:					
None to two hours	85	82	84	57	
Three hours	10	12	9	29	50
Four hours		3	3	7	50
Five hours	2.5	1	2	7	
More than five hours	2.5	2	1		

Objective 8

To provide each student who is willing to work with an opportunity to succeed (or at least to avoid "failure") in reaching those levels of achievement commensurate with his individual abilities and interests.

	Letter Grade	Phase	Year Grad.
Relationship favorite subject to future goals	x		
Relationship of best grade subject to future goals	x		
Relationship of most disliked subject to future goals	x		x
Relationship of poorest grade subject to future goals	x		x
Personal satisfaction from hard work on studies	x		
Difference in course material between phases (1-2, 2-3, 3-4, 4-5) in:			
English	x		
Math	x		
Social Studies	x		
Science	x		
Foreign Languages	x		

"x" denotes significance ($p < .05$)

Objective 8 - Percentage Response Category Tables

62. The relationship of my favorite subject to my future goals is:

Letter Grades df = 16; x^2 = 609.5	A	B	C	D	F
Response Percentages:					
Highly relevant	39	28	27	12	50
Quite relevant	30	28	28	29	
Slightly relevant	21	26	21	24	
Slightly irrelevant	7	9	14	12	
Highly irrelevant	2	9	10	24	50

31. The relationship of the subject in which I get my best grades to my future goals is:

Letter Grades df = 16; x^2 = 302.9	A	B	C	D	F
Response Percentages:					
Highly relevant	7	16	17	17	50
Slightly relevant	41	25	33	25	
Quite relevant	33	30	27	42	
Slightly irrelevant	3	13	10	8	50
Highly irrelevant	15	14	12	8	

32. The relationship of the subject that I most dislike to my future goals is:

Letter Grade df = 16; x^2 = 516.8	A	B	C	D	F
Response Percentages:					
Highly relevant	2	6	12	24	
Quite relevant	15	16	18	6	
Slightly relevant	27	31	27	6	
Slightly irrelevant	22	19	14	18	
Highly irrelevant	35	28	30	47	100

Year Graduate df = 12; x^2 = 69.8	70	69	68	67
Response Percentages:				
Highly relevant	12	6	7	5
Quite relevant	19	12	22	11
Slightly relevant	25	31	28	31
Slightly irrelevant	15	23	14	18
Highly irrelevant	29	28	28	34

33. The relationship of the subject in which I get my poorest grades to my future goals is:

Letter Grade df = 16; x^2 = 232.3	A	B	C	D	F
Response Percentages:					
Highly relevant	22	13	20	10	
Quite relevant	28	23	22	50	
Slightly relevant	28	30	16	20	
Slightly irrelevant	17	15	16	20	
Highly irrelevant	6	18	26		100

Year Graduate df = 12; x^2 = 27.8	70	69	68	67
Response Percentages:				
Highly relevant	14	16	19	14
Quite relevant	30	25	28	13
Slightly relevant	19	25	19	41
Slightly irrelevant	16	18	10	15
Highly irrelevant	20	15	24	19

44. How satisfying is it to you personally to work hard on studies?

Letter Grade df = 16; x^2 = 661.4	A	B	C	D	F
Response Percentages:					
It is extremely satisfying	11	14	12	12	
It is very satisfying	64	47	35	29	50
It is slightly satisfying	16	29	37	53	
It is slightly unpleasant	5	7	12	6	50
It is extremely unpleasant	4	3	5		

63. Does the course material differ between the phases in English when comparing phase 3 with 4 or 2 with 3 or 4 with 5 or 1 with 2?

Letter Grade df = 16; x^2 = 657.9	A	B	C	D	F
Response Percentages:					
Very much	20	27	30	29	50
Somewhat	60	50	49	24	
Little	11	13	12	29	50
Very little	7	8	6	18	
Not at all	2	2	3		

64. Does the course material differ between the phases in Mathematics when comparing phase 3 with 4 or 2 with 3 or 4 with 5 or 1 with 2?

Letter Grade df = 16; x^2 = 638.6	A	B	C	D	F
Response Percentages:					
Very much	30	24	30	31	100
Somewhat	47	48	51	31	
Little	17	14	9	13	
Very little	3	8	9	25	
Not at all	1.1	5	1		

65. Does the course material differ between the phases in Social Studies when comparing phase 3 with 4 or 2 with 3 or 4 with 5 or 1 with 2?

Letter Grade df = 16; x^2 = 624.4	A	B	C	D	F
Response Percentages:					
Very much	24	25	23	24	50
Somewhat	61	53	58	48	
Little	7	13	9	18	
Very little	7	6	6	5	
Not at all		3	4	5	50

66. Does the course material differ between the phases in Science when comparing phase 3 with 4 or 2 with 3 or 4 with 5 or 1 with 2?

Letter Grade df = 16; x^2 = 626.7	A	B	C	D	F
Response Percentages:					
Very much	35	29	30	31	50
Somewhat	44	48	50	44	
Little	19	17	13	13	
Very little	2	4	7	7	
Not at all		2	1	7	50

67. Does the course material differ between the phases in Foreign Language when comparing phase 3 with 4 or 2 with 3 or 4 with 5 or 1 with 2?

Letter Grade df = 16; x^2 = 597.6	A	B	C	D	F
Response Percentages:					
Very much	20	26	30	35	50
Somewhat	51	51	47	7	50
Little	24	18	13	35	
Very little	4	6	6		
Not at all	4	4	3	22	

Objective 9

To provide pupils, parents, prospective employers, college admissions officers and others with a meaningful and realistic appraisal of the achievements of each of the pupils who participates in our instructional program.

	Letter Grade	Phase	Year Grad.
Student's satisfaction with self	x	x	
Friends' admiration of very bright students	x	x	
Perception of self as student	x	x	
Homework assignments vary with seasons			x

"x" denotes significance ($p < .05$)

Objective 9 - Percentage Response Category Tables

68. Which statement below comes closest to your feeling about yourself?

Letter Grade df = 16; x^2 = 614.2	A	B	C	D	F
Response Percentages:					
I don't like the way I am	2	4	5	6	
I would change myself greatly	9	8	10	18	
I would change myself somewhat	56	48	48	24	50
I can accept myself	33	31	30	29	
I would not change at all		9	7	24	50

Phase df = 16; x^2 = 36.8	3	4	5
Response Percentages:			
I don't like the way I am	5	4	5
I would change myself greatly	13	8	1
I would change myself somewhat	39	53	41
I can accept myself	31	28	48
I would not change at all	12	7	5

69. How much do your friends admire students who are very bright?

Letter Grade df = 16; x^2 = 674.9	A	B	C	D	F
Response Percentages:					
They admire them very much	19	15	13	12	100
They admire them some	63	60	46	53	
They admire them a little	17	20	29	29	
They don't admire them at all	2	5	11	6	

Phase df = 16; x^2 = 44.4	3	4	5
Response Percentages:			
They admire them very much	12	13	30
They admire them some	50	60	48
They admire them a little	22	22	22
They don't admire them at all	14	4	

70. You see yourself as what kind of student?

Letter Grade df = 16; x^2 = 733.4	A	B	C	D	F
Response Percentages:					
Very bright	15	4	3		
Bright	60	39	17		
Average	25	55	71	88	50
Below Average		2	7	12	
Poor		1	2		50

Phase df = 16; x^2 = 185.9	3	4	5
Response Percentages:			
Very bright	2	2	26
Bright	12	38	65
Average	76	57	8
Below Average	8	1	
Poor	2	.7	1

71. Do your homework assignments vary with the seasons? (Do you get less homework during warm weather as opposed to cold weather?)

Year Graduate df = 6; x^2 = 49.2	70	69	68	67
Response Percentages:				
Yes	10	20	8	22
No	32	49	53	51
Too early to tell	57	30	39	27

Miscellaneous

To develop carefully planned courses of study for each of our course offerings, courses of study that will help to maintain continuity in a flexible instruction program. (Refer to the sheet entitled "What We Expect to Find in a Course of Study".)

	Letter Grade	Phase	Year Grad.
Diggerence in course material between phases (1-2, 2-3, 3-4, 4-5) in:			
English	x		
Math	x		
Social Studies	x		
Science	x		
Foreign Languages	x		
Homework assignments vary with the seasons			x
Peer Groups			
Change of friends since non-graded program initiated			
Select phase to be with friends			
Down-phase to avoid teacher	x	x	
Lower phase students looked down upon	x	x	x
Friends generally in same phase		x	
Up-phase to be with friends			x
Down-phase to be with friends			
Students content to get by			

"x" denotes significance ($p < .05$)

Miscellaneous

63. Does the course material differ between the phases in English when comparing phase 3 with 4 or 2 with 3 or 4 with 5 or 1 with 2?

Letter Grade df = 16; x^2 = 657.9	A	B	C	D	F
Response Percentages:					
Very much	20	27	30	29	50
Somewhat	60	50	49	24	
Little	11	13	12	29	50
Very little	7	8	6	18	
Not at all	2	2	3		

64. Does the course material differ between the phases in Mathematics when comparing phase 3 with 4 or 2 with 3 or 4 with 5 or 1 with 2?

Letter Grade df = 16; x^2 = 638.6	A	B	C	D	F
Response Percentages:					
Very much	30	24	30	31	100
Somewhat	47	48	51	31	
Little	17	14	9	13	
Very little	3	8	9	25	
Not at all	1.1	5	1		

65. Does the course material differ between the phases in Social Studies when comparing phase 3 with 4 or 2 with 3 or 4 with 5 or 1 with 2?

Letter Grade df = 16; x^2 = 624.4	A	B	C	D	F
Response Percentages:					
Very much	24	25	23	24	50
Somewhat	61	53	58	48	
Little	7	13	9	18	
Very little	7	6	6	5	
Not at all		3	4	5	50

66. Does the course material differ between the phases in Science when comparing phase 3 with 4 or 2 with 3 or 4 with 5 or 1 with 2?

Letter Grade df = 16; x^2	A	B	C	D	F
Response Percentages:					
Very much	35	29	30	31	50
Somewhat	44	48	50	44	
Little	19	17	13	13	
Very little	2	4	7	7	
Not at all		2	1	7	50

67. Does the course material differ between the phases in Foreign Language when comparing phase 3 with 4 or 2 with 3 or 4 with 5 or 1 with 2?

Letter Grade df = 16; x^2 = 597.6	A	B	C	D	F
Response Percentages:					
Very much	20	26	30	35	50
Somewhat	51	51	47	7	50
Little	24	18	13	35	
Very little	4	6	6		
Not at all	4	4	3	22	

71. Do your homework assignments vary with the seasons? (Do you get less homework during warm weather as opposed to cold weather?)

Year Graduate df = 6; x^2 = 49.2	70	69	68	67
Response percentages:				
Yes	10	20	8	22
No	32	49	53	51
Too early to tell	57	30	39	27

72. Have many of your close friends changed since the nongraded program has been initiated?

Yes
No

73. When you select a phase for a particular course, do you first find out which phase your close friends selected?

Yes
No
I did not choose this phase

74. If you were doing well in a particular subject but didn't like the teacher, would you down-phase to change classes?

Letter Grade df = 4; x^2 = 691.1	A	B	C	D	F
Response Percentages:					
Yes	16	13	21	47	50
No	82	85	77	41	50

Phase df = 4; x^2 = 38.8	3	4	5
Response Percentages:			
Yes	25	14	11
No	73	85	89

75. Are lower phase students looked down upon by other students?

Letter Grade df = 16; x^2 = 19.1	A	B	C	D	F
Response Percentages:					
Yes, always	11	6	11	6	
Frequently	16	28	17	53	50
Sometimes	56	41	40	29	50
Rarely	16	22	26	12	
No, never		2	6		

Phase df = 16; x^2 = 9.2	3	4	5
Response Percentages:			
Yes, always	12	7	1
Frequently	24	25	28
Sometimes	35	45	45
Rarely	24	21	28
No, never	4	3	

Year Graduate df = 12; x^2 = 2.4	70	69	68	67
Response Percentages:				
Yes, always	9	7	7	8
Frequently	24	28	26	22
Sometimes	41	43	41	42
Rarely	22	20	23	25
No, never	3	3	3	3

76. Are most of your friends generally in the same phase as you?

Phase df = 4; x^2 = 16.1	3	4	5
Response Percentages:			
Yes	65	75	68
No	29	23	32

77. If your friends were in a phase level above the one you are presently in, and not in the same room, would you try to work harder to up-phase?

Year Graduate df = 3; x^2 = 16.8	70	69	68	67
Response Percentages:				
Yes	44	37	30	26
No	50	61	70	72

78. If your friends were in a phase below the one that you are presently in, and not in the same room, would you try to down-phase?

Yes
No

79. Many students here are just content to get by.

True
False

Phase Changes - (1966-67)

Phase changes were recorded according to marking period. The total number of changes (479) lends support to the contention of program flexibility. Tables 50 and 50A show that a somewhat larger number of changes were accomplished in an upward direction. With a limited number of exceptions, most changes involved move-ments of one phase. Finally it is interesting to note that more than forty percent of the changes occurred during the second half of the year (2 - 3, 3 - 4 marking periods).

TABLE 50: Phase Changes Upward - (1966-67)

Marking Period	Between Phase: 1-2	2-3	3-4	4-5	1-3	2-4	3-5	1-4	2-5	1-5	Total
1-2	25	55	59	17	0	0	1	1	0	0	158
2-3	7	27	35	16	0	0	0	3	0	0	88
3-4	1	9	9	1	0	0	1	0	0	0	21
Total	33	91	103	34	0	0	2	4	0	0	Grand Total - 267

TABLE 50A: Phase Changes Downward - (1966-67)

Marking Period	Between Phase: 2-1	3-2	4-3	5-4	3-1	4-2	5-3	4-1	5-2	5-1	Total
1-2	6	46	42	11	3	1	0	3	0	0	112
2-3	5	26	33	12	0	0	0	1	0	0	77
3-4	0	10	11	2	0	0	0	0	0	0	23
Total	11	82	86	25	3	1	0	4	0	0	Grand Total - 212

TOTAL CHANGES - 479

CHAPTER VI. EVALUATION: COURSES OF STUDY

The evaluation of courses of study thus far published for the Amherst-Pelham Regional School District was conducted by seven experts in curriculum planning: Dr. Stowell C. Goding, Foreign Languages; Dr. Jim C. Fortune and Dr. J. Franklin Fitzgerald, Mathematics; Dr. William Lauroesch and Dr. J. T. Sandefur, English; Dr. Claud Thompson, Social Studies; and Mr. Ralph Keirstead, Science. These gentlemen were recommended by members of the faculty of the School of Education, University of Massachusetts, as eminently qualified in their respective content areas, in curriculum planning and secondary education. Courses of study were to be evaluated with reference to criteria established in the following publications: Summer Curriculum Project; Objectives and Philosophy, Teachers' Guide #2, 1964; and Efficiency in Our Schools, Teachers' Guide #3, 1965; all by the Amherst-Pelham Regional School District. Also used for criteria was Robert F. Mager's Preparing Instructional Objectives, Fearon Publishers, Palo Alto, California, 1962.

Dr. Stowell C. Goding served as the curriculum consultant in the area of foreign languages. Although his comments were most favorable with respect to the work completed at this date, suggestions are made concerning standardized prognostic and achievement tests as well as programmed instructional materials for the language laboratory. In addition, Goding has made some interesting recommendations concerning the significance of active participation in professional organizations.

Dr. Jim C. Fortune inspected courses of study in high school mathematics. Although his comments are specific to each course of study reviewed, he generally found too heavy a reliance on textbooks and a failure to relate specific objectives to methods of instruction. Fortune's basic conclusion, "The curriculum materials, although not in final form, represent a proper and effective step toward instructional improvement," is very much like the conclusion reached by the majority of reviewers.

Dr. J. Franklin Fitzgerald, reviewer of seventh and eighth grade mathematics materials, has focused his attention on the extent to which the courses of study relate to the overall objectives of the school district. He concludes:

> The objectives seem to imply complete individualized instruction but the guides are not designed for such instruction. They seem to be designed for two curricula starting at a given grade level with classes determined by ability grouping. This permits some instruction based on ability but is not true individualized instruction.

In commenting on the courses of study relative to the Summer Curriculum Project's directions, Dr. Fitzgerald noted that the basically traditional evaluation techniques, as well as specific objectives, stressed skill attainment. He felt that teaching methods were too frequently lacking in elaboration and imagination. Finally, he deplored the existence of definition and statement errors which "come about when statements are given without the necessary qualifications."

Fitzgerald's basic conclusion, "The courses of study are not particularly useful as they now exist," follows from his major concern ". . . that the Amherst objectives imply how to teach or organize the curriculum but do not indicate what is to be achieved by the student." He continues "Without general goals (concepts, attitudes and skills) given by the school system, the people who prepared the courses of study really had no guidelines for giving specific goals. Hence, the courses of study tend to be content and skill oriented."

Dr. William Lauroesch, who reviewed eight courses of study in English, has expressed some concern with reference to the criteria for the choice of various literary selections at various levels within the curriculum. In essence, he maintains that "the criterion for selection is whether or not a particular selection demonstrates what you are trying to teach a particular group at a particular stage of their development as readers of literature."

Dr. Lauroesch also felt that teaching methods left much to be desired. His suggestion regarding the establishment of a departmental bank of successful teaching methods is unusually provocative.

Dr. J. T. Sandefur, in reviewing the eight courses of study in English, devised an ingenious 120 point scale which might prove to be of considerable value in future attempts in curriculum evaluation. The scale, both thorough and comprehensive, enables the reader to specify the relative strengths and shortcomings for each course of study. Moreover, it objectifies the final judgement concerning the course of study's overall value.

In reference to overall value, Dr. Sandefur judged five of the eight courses of study to be "minimal." His general conclusions with reference to these efforts were as follows:

1. There simply was not enough detail in the objectives, content, teaching methods, or evaluation to believe that an individualized instructional program could be based on these curricular materials.

2. The teachers obviously were concentrating on behavioral objectives but were not able to carry them through the content and evaluation techniques.

3. Most of the teaching methods were group methods, not individualized methods.

4. After having stated a behavioral objective, the teacher then devoted every effort to the traditional content in very traditional ways.

Dr. Claud Thompson, reader of courses of study developed by members of the social studies department, made numerous comments with such insight that many could be applied to other areas. For example, in reference to the planning of lessons, he said: "...too often do teachers devise lessons and then identify objectives; a practice which seems to reduce educational objectives to convenient rationalizations.

Dr. Thompson also has made suggestions with reference to the development of objectives for the various departmental offerings. Thus, he notes that one course of study, prepared for different phases from an identical core, provided for the higher phases by requiring additional work at higher levels of abstraction. However, he is critical of the fact that specific objectives were the same for each level, that they tend to be disproportionately weighted toward rote mastery of content, and that the need for the relation of such objectives to specific procedures was not made.

In reference to structure, he has noted that in courses designed for more than one level, phase three was required to cover less in terms of historical time. The comment in connection with this is as follows: "If one could accept the doubtful assumption that phase three should 'cover' a shorter segment of American history, then it might be advisable to begin rather than end with the War Between the States." In a similar vein, he points to the need for questioning in reference to the place of specific courses within the curriculum by calling attention to the fact that the recycling of American history in grades eight and eleven had its roots in the outmoded recommendations of the 1916 Commission on the Reorganization of Secondary Education.

Mr. Ralph Keirstead, curriculum consultant for both junior and senior high school science materials, has made one specific recommendation which seems appropriate in terms of comments made by other reviewers. After observing that some courses of study were fairly well done while others left much to be desired, and after recognizing considerable variability with respect to the interpretation of initial instructions, he concludes: "It would appear that each course of study may have been developed individually and somewhat in isolation from the others." He strongly recommends that intra-departmental lines of communication be exercised in resolving such basic issues as the most appropriate sequence of scientific experiences as well as in developing relevant and efficacious "schemes for teaching" and techniques for evaluation.

It would appear that each reviewer, by attacking the evaluation of the courses of study from different directions, has pointed out suitable suggestions for areas outside his specific field. Intra-departmental curriculum planning, departmental information banks, specific guidelines from the school district, and a faculty kept abreast with latest developments through professional organizations seem to be among the possibilities for future exploration.

In conclusion, it might be advisable to keep Thompson's introductory remarks in mind while reflecting on the curriculum evaluations.

> The building and evaluation of curriculum and course of study is a continuous process -- one which reflects new approaches, new materials, and the changing needs and makeup of the student body and community served by the school. The steps taken thus far in the Amherst Evaluation Project take these factors well into account, and the examined units show many highly desirable effects of such an awareness on the part of the participants. Viewed not as final products but as waystations in the journey of curriculum development, the courses of study represent significant accomplishments.

Evaluation of Curriculum Materials

Social Studies -- Claud Thompson

The building and evaluation of curriculum and courses of study is a continuous process -- one which reflects new approaches, new materials, and the changing needs and makeup of the student body and community served by the school. The steps taken thus far in the Amherst Evaluation Project take these factors well into account, and the examined units show many highly desirable effects of such an awareness on the part of the participants. Viewed not as final products but as waystations in the journey of curriculum development, the courses of study represent significant accomplishments.

For the most part, the comments and suggestions presented in this report will consist of areas which to an outsider appear to present opportunities for further refinement and improvement of the courses of study and of the total program. Those comments which apply to specific courses of study are contained in about 125 minutes of recordings made by the evaluator in the course of his examination of them.* Specific examples are referred to in these recordings, primarily for the use of those persons directly responsible for each unit.

Also provided are brief comments relative to the application in each course of study of the criteria contained in the booklet Summer Curriculum Project: A Guidebook for Participating Teachers. The strictness with which the participants apply these criteria is a matter for decision at the local level, and thus it is reported on largely without judgment.

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* See Appendix

This report will be organized around the nine areas outlined in pages 6-8 of the booklet describing the Summer Curriculum Project. Since generally more attention will be given to areas where improvement is suggested, it bears repeating that this report is not intended to present an unfavorable evaluation. The many fine aspects of the work are duly recognized, but they require little elaboration.

Loose-Leaf Binder. All of the courses of study were bound in a form which makes replacement of pages quite convenient. The act of changing or adding pages may cause some difficulty with page numbers, but this is more than offset by the convenience which the loose-leaf binder affords. A number of courses of study either lacked or had inconsistent page-numbering patterns.

Organization. Virtually all courses of study were organized in logical, systematic ways. The material was, with only a few exceptions as noted in the recorded comments, divided into segments called "units." In only a few cases, however, were they units as we generally understand the term. It often appears that the "unit" is a convenient division of material into more or less equal blocks of time, rather than an organized learning experience with clearly identifiable parts, i.e., introductory, developmental, and culminating activities, and evaluation.

The test of this, however, is in the actual teaching of the unit, for in most courses of study the teaching methods were explained only briefly -- perhaps too briefly. In one case (Grade 8 American History, Phases 1 & 2) there was a very successful attempt to relate specific procedures to specific aims and content. This would seem to have a great deal of promise, for too often do teachers devise lessons and then identify objectives; a practice which seems to reduce educational objectives to convenient rationalizations. A major difficulty is that specific objectives are often ignored in the planning of lessons unless a conscious attempt is made to identify specific procedures with them and place the procedures in appropriate parts of true units.

The approximate time allotted to each unit was specified in about half of the courses of study, as indicated in the chart which forms Appendix A to this report. This should be done in all cases.

All of the courses of study were designed for students at particular levels of achievement, and in only one case (a chronological American history course) were courses presented at different phases for students in the same grade.

These three courses were prepared from identical cores, the provision for the higher phases being in the form of additional work at higher levels of abstraction. Specific objectives, however, remained the same for all three phases. Another difference is in the time period which the course deals with; phase three progresses only through the Civil War while phases four and five move much closer to the present. If one could accept the doubtful assumption that phase three should "cover" a shorter segment of American history, then it might be advisable to begin rather than to end with the War Between the States.

It is somewhat disturbing that regardless of the means employed to provide for different achievement levels, the specific objectives are the same for each level. This would suggest even more strongly than before that greater attention must be paid to the relation of specific objectives to specific procedures.

Table of Contents. Most courses of study include Tables of Contents. In a few cases, as noted in Appendix A, page-numbering difficulties make it quite inconvenient to locate specific units. A related problem is the practice in some of the courses of study, of referring the reader back to items in previous units. This is quite time-consuming, and the brevity of the items referred to raises serious questions as to whether the inconvenience is justified by the slight saving in paper and typing.

Subject Matter. With only a few exceptions the units are accompanied by well-written overviews. In a very few cases the "overview" becomes a statement of methods or organizational devices the teacher will use. These should be rewritten, as suggested in the recorded comments. One excellent overview was called an "Introduction," and followed an "overview" which was a description of method.

Concepts and Attitudes. This area is treated at great length in the recorded comments and will thus be generalized in this report. Most of the items listed in the courses of study are generalizations, stated in complete sentences, showing the relationship between two or more concepts. Some are sentences the purposes of which is to define single concepts. (These are the two types represented as examples a and b, respectively, on page 6 of the booklet, Summer Curriculum Project.)

This reviewer agrees with the statement in the above-named publication that the listing of concepts and attitudes is one of the most important parts of a course of study. Whether or not we agree with Edgar Bruce Wesley's famous definition of the social studies, we must at least share his belief that the social sciences have a great deal to do with it. Much recent research literature in social studies education supports the idea that the main concepts and generalizations from the social sciences must form the core of the social studies program. (This is not all, however. At the other end of the spectrum is the emphasis upon value clarification and analysis of public issues. We are also concerned with attitudes. The point is that modern social studies programs can afford to ignore neither.)

One important characteristic of a generalization -- or an attitude -- is that it must be formed by the student. It is completely ineffective to impart either by telling. In the case of generalizations the process is inductive, and it is not automatic. Thus, if the concepts and attitudes are to be something which students are to "grasp during a unit and. . . continue to remember throughout their lives," the crucial factor is the teaching strategy employed. It also follows that generalizations induced from data alone are entirely free of value judgments, and must be so stated. The strategies a teacher uses are a function of his entire orientation, which is beyond the scope of this report. It is crucial that we remember, though, that generalizations and attitudes are indispensable as determinants of behavior. If we are concerned with behavioral objectives we must be concerned with behavior. A concern with behavior implies a concern with attitudes and generalizations, neither of which can be "taught." It is hoped that all of the courses of study will have added to them certain procedures for stimulation of inductive thinking and clarification of values.

A coordinated effort could profitably be made to determine some powerful generalizations and concepts from the social sciences as well as some procedural and behavioral (but not substantive) attitudes. Some excellent references for such an effort are:

> Irving Morrissett, (ed.) Concepts and Structures in the New Social Science Curriculum.
>
> Wisconsin Department of Public Instruction, A Conceptual Framework for Social Studies in Wisconsin Schools.
>
> Edwin Fenton, Teaching the New Social Studies: An Inductive Approach.

Those who had difficulty excluding value judgments from the concepts (and in some cases the specific objectives) might do well to refer to Edwin Fenton's discussion of values in the above-mentioned book.

Specific Objectives. Generally the courses of study list specific objectives in behavioral terms, in a form which is compatible with Mager's Preparing Instructional Objectives. The Amherst Curriculum Project has made a great step forward in doing this, and in suggesting that the student should be made aware of what is expected of him. Too often we seem to keep these goals a secret from the student and then express surprise when he fails to arrive at the place to which he did not know he was expected to go. In several specific cases, as noted in the recorded comments, the objectives are not stated in consistent or compatible terms; as completions of sentences they either fail to fit or they lapse into specific directions to students, stated in the second person.

There is a very prevalent tendency to state in behavioral *terms* mere descriptions of subject-matter content rather than genuine intended *outcomes*. Such objectives of pure subject-matter acquisition not only provide little benefit to the learner, but stating them in behavioral terms often appears as a misrepresentation of fact. Although certain of the specific objectives which call for performances do emphasize certain critical and analytical skills, the vast majority stress rote memorization of substantive content. Very conspicuous by their relative absence are specific objectives in the area of skill development. If we may presume that the principal benefit of stating objectives in behavioral terms is that we have helped the student only if we make him *able* to do something, it follows that *doing* the thing we make him able to do is also desirable. From this we may further conclude that it is also desirable that he be *inclined* as well as able to do certain things under appropriate circumstances. Skills, especially those related to effective thinking, tend to be used by those who possess them. It is therefore urged that specific skill objectives, stated in behavioral terms, be added to the lists in all of the courses of study.

Very helpful suggestions regarding skill development are found in Helen Carpenter, (ed.), *Skill Development in Social Studies*, the Thirty-Third Yearbook of the National Council for the Social Studies. The Thirty-Seventh Yearbook, *Effective Thinking in the Social Studies*, is also very useful in this area. Very useful suggestions concerning the higher orders of thinking and ways of stimulating such thought are found in Norris M. Sanders, *Classroom Questions: What Kinds?* (New York: Harper & Row).

As mentioned earlier in this report, in the single case in which the same course was presented at three different phase or achievement levels, no differentiation in specific objectives was made. Because the main thrust of the Amherst Curriculum Project is in the area of establishing and stating specific objectives in behavioral terms, and because as presently stated they tend to be weighted disproportionately toward rote mastery of content, they remain the principal object of further development.

Teaching Methods. All of the courses of study list, and a few describe the teaching methods to be used. In some cases the lists tend to remain the same from unit to unit. Although it is perhaps outside the scope of the project at the present time, it appears that more careful description as well as an attempt to relate certain procedures to specific objectives would be an appropriate project for a later date.

References and Aids. Generally the lists of references and aids are adequate; some are outstanding. It should be noted that, considering the changes taking place in the world, and the vast amounts of new high-quality materials now becoming available, the development of lists of references and aids must be a continuing process.

The same factors also suggest the advisability of reviewing the fact that virtually all of the courses of study make use of basic texts. These uses range from one course where the text is treated as a useful aid, to one course which arranges its material and allocates its time by "chapters" rather than units. There are, of course, many exceptions; but generally what is considered to be "good teaching" seems to vary inversely with the degree to which a basic text dictates the organization of a course.

Evaluation Techniques. This area is dealt with at length in the recorded comments. Some courses provide the tests themselves, as well as descriptions of other techniques. Others merely list them.

One disturbing tendency was noted -- that of relating certain objectives to certain types of evaluation techniques. While it is true that certain types of objectives can be measured better by certain types of evaluation techniques than by others, there was little or no apparent effort to classify objectives as to the most appropriate means of evaluation. For the most part, objectives to be measured by specified techniques seemed to be selected at random.

Another area of need, although not specified as an aim of the Amherst Curriculum Project, is that of coordinating the general areas of content into a meaningful sequence without gaps or needless repetition. There is a great deal of repetition of virtually the same content in Unit I, Basic Concepts and Vocabulary of Geography, Grade 7, Phase 3, and World Geography and Civics, Phase 3. Some coordination of the efforts of teachers assigned to these courses is urgently needed.

The other urgent need is to eliminate the repetition of United States History, Phase 4, presumably at grade 11, after it was dealt with in grade eight. The re-cycling of American history in grades eight and eleven has its roots in the 1916 recommendations of the Commission on the Reorganization of Secondary Education. The reasons given then (eighth grade was terminal for a high percentage of students, and high school was terminal for nearly all the rest) no longer have validity, since virtually all students continue their educations at least through the high school. The pattern has persisted, however, partly through tradition and partly for the convenience of teachers rather than the best interests of the students. Only in recent years has this pattern begun to crumble, and when it does it tends to be in the direction of a single integrated two-year pattern in American history, occupying two consecutive years. Some attention to this matter is strongly urged.

BRIEF COMMENTS

Civics, Phase 3

Table of Contents: provided

Organization: only very large divisions listed as complete units
objectives listed by "chapters" while concepts and attitudes are listed only for "units"

Subject Matter: overview limited to short description of organization of the course

Concepts and Attitudes: some concepts and attitudes not true concepts supportable through inquiry

Specific Objectives: stated behaviorally
many demand skills as well as substantive knowledge

Teaching Methods: methods listed and very briefly described

References and Aids: course based on text, but text not listed
other sources are listed

Evaluation Techniques: tests provided

World Geography and Civics, Phase 3

Table of Contents: provided

Organization: only very large divisions listed as complete units
objectives listed by "chapters" while concepts and attitudes are listed only for "units"

ⓜ

Subject Matter: very good overview, provided under the heading, "Introduction"

Concepts and Attitudes: very few listed for there are only two "units"
some specific knowledge aims listed as concepts

Specific Objectives: stated behaviorally, many demanding skills as well as knowledge

Teaching Methods: reasonable variety in methods listed and described

References and Aids: course based on text
a few other aids listed but not closely integrated to activities

Evaluation Techniques: tests provided in course of study
other projects described for purposes of evaluation

Ancient History, Phases 4 & 5

Table of Contents: provided

Organization: systematically organized

Subject Matter: no overviews for individual units

Concepts and Attitudes: generalizations fairly closely tied to content

Specific Objectives: stated in behavioral terms, but limited almost entirely to substantive content
little or no skills

Teaching Methods: listed by category only, not described
variety possible, but not described or apparent from lists, which tend to be nearly identical from unit to unit

References and Aids: extensive list, but units do not show specific uses

Evaluation Techniques: listed briefly but not described

Modern Problems, Phase 3

Table of Contents: provided

Organization: logical and systematic
time for each unit not specified

Subject Matter: good overviews and outlines

Concepts and Attitudes: not mentioned at all

Specific Objectives: stated as in most other units, but without "Student will be able to. . . :" Addition of this phrase would make all objectives conform to Mager form.

Teaching Methods: described very briefly

References and Aids: a short list provided for each unit

Evaluation Techniques: described very briefly

Unit I, Basic Concepts and Vocabulary of Geography, Grade 7, Phase 3

Table of Contents: provided

Organization: systematically organized, but time allotted for each part is not specified

Subject Matter: very complete and well organized

Concepts and Attitudes: stated in terms of teacher's aims or procedures rather than as concepts or attitudes
#6-10 listed as skill aims

Specific Objectives: some very factual and highly technical, require high degree of memorization
many stress skills

Teaching Methods: listed and described briefly by categories

References and Aids: good list

Evaluation Techniques: described in good detail
tests and other items included

Unit II, British Isles, Grade 7, Phase 3

All comments are the same as for Unit I, Basic concepts and Vocabulary of Geography, since the units are in the same format.

American History, Grade 8, Phases 3, 4, 5

Table of Contents: provided

Organization: systematically organized
much repetition within the courses of study

Subject Matter: not described -- reader is directed to commercial publication

Concepts and Attitudes: stated as questions rather than as discovered generalizations

Specific Objectives: not stated in course of study -- Commercial material does not state them in behavioral terms or as measurable outcomes not differentiated for different phases or levels

Teaching Methods: not described -- presumably to be obtained from teachers' guide

References and Aids: none listed

Evaluation Techniques: commercially prepared tests and assigned written work

American History, Grade 8, Phases 1 & 2

Table of Contents: none

Organization: very well organized

Subject Matter: excellent overviews, showing awareness of phase 1 and 2 problems

Concepts and Attitudes: precisely stated generalizations from social science disciplines

Specific Objectives: heavily oriented toward skill development
very precisely stated

Teaching Methods: well stated, varied, especially creative and suited to students in phases 1 and 2

References and Aids: varied and useful -- listed as related to specific activities and objectives

Evaluation Techniques: stated briefly and exceptionally well -- suited to phases 1 and 2

United States History, Phase 4

Table of Contents: provided

Organization: systematically organized

Subject Matter: excellent overviews
organized topically-chronologically

Concepts and Attitudes: generally well stated. A few value judgments appear in the specific concepts. Some specific objectives, in behavioral terms, appear here rather than with objectives.

Specific objectives: stated in behavioral terms, with heavy emphasis on rote mastery of content

Teaching Methods: well described and good variety, but quality deteriorates badly in later units

References and Aids: varied and useful -- well described

Evaluation Techniques: tests included -- some tendency, in later units especially, to overemphasize certain specific objectives -- highly factual

Evaluation of Curriculum Material

Foreign Languages -- Stowell C. Goding

Part I -- Evaluation of Courses of Study

Overview, the evaluation assignment: "Review eight units, discuss the materials with members of the department, and to submit a report of your investigation which includes general comments as well as specific critiques for each course of study." The head of the department of Classical Languages was out of the country and not available for interview. However, the teacher of Latin, creator of two of the units, was interviewed as was the head of the department of Modern Languages. Seven units of instruction, six in Latin and one in French were submitted for evaluation and carefully reviewed.

Organization The courses of study were organized in a formal and usable manner through the use of a unit approach. In all cases, the units were specifically delineated and a time period specified with approximate limits. For example, Latin II, Phase 4, Unit I "three weeks;" French IV, Phase 3, Unit 4 "approximate time: 13 days." Not all units were so specifically limited in time. Example, Latin I, Phase 4, Unit I "about three weeks."

Table of Contents. Each course of study did contain a table of contents which listed all unit titles, and, in addition, briefly described the content of the unit.

Subject Matter. Each unit was introduced by a brief, clear and concise overview which outlined the subject matter of the unit.

Concepts and Attitudes. In every case, the broad ideas of each unit were clearly expressed under the specific title of "Concepts." However, the directive that the students should continue to remember them throughout their lives is an imponderable which depends on too many factors to measure at this point. Individual motivation, subsequent education and careers and all future developments make it impossible to list any value judgment here. It seems evident that most students should be able to "grasp" the clearly expressed broad ideas -- given adequate motivation, good teaching, proper assignment to phase level.

Specific Objectives. Under the title "Specific Goals" or Specific Objectives, each unit carefully and completely defined the expected outcomes of the work and the manner of testing them. In the French units, there were expressed more under Concepts as well as under Objectives. Measurable possible performance was related to the development of concepts and attitudes under the sub-heading "Cultural Concepts" which constantly contrasted American and French attitudes, cultural concepts and ideas. If implemented as stated, pupil concepts and attitudes should be developed in a meaningful and useful way.

Under the heading "The students must be able to. . ." the French materials listed quite specifically no less than 23 intended outcomes of the work for 13 days in Unit 34, French IV, Phase 3. These were listed in both behavioral and performance terms.

In both Latin and French the objectives for each phase level were clearly stated. Example: Latin II, Phase 3 lists six specific goals while Latin I, Phase 4 lists no less than nine goals. In the case of French, no such comparison is possible since materials for Level IV only were submitted.

Teaching Methods. The French materials were quite complete in the listing of ten varied methods of teaching the materials. The Latin units were rather restricted in this matter. However, it must be stated at once that the admirable workbook, "The Teaching of the Classical Languages in the Amherst Regional High School," created by the head of the department of Classical Languages applies to all levels and units in the teaching of Latin and more than fulfills this directive. While some of the contents concern only the teaching of Classical Languages at the Amherst Regional High School ("Materials available in the Latin Room"), such items as "The Importance of Latin to English," "Opportunities for Improvement," "Specific Devices in the Teaching of Latin," would be most useful and helpful to any teacher of Latin in any situation. In fact, this booklet should be published and made widely available to all teachers of Latin.

References and Aids. While far from complete in French, these are more than acceptable and adequate for good teaching. For Latin, pp. 14-26 under the headings Materials Available in the Latin Room, Books Available in School Library, it is the judgment of this evaluator that students in the Amherst Regional High School are exceedingly fortunate in the richness of references and aids available. Not only is a very large selection of books of many kinds available, there are also tapes, recordings, filmstrips and many visuals. Again, it is hoped that this nearly definitive bibliography be made more widely available to all teachers of Classical Languages. Many materials for Greek are also listed.

In French, audio-visual materials could be greatly expanded both for enrichment and enhancement of the teaching materials. In discussion with the department head, this evaluator suggested such available new material as the slides, tapes, films, exhibits and many other materials available at nominal cost from the French Cultural Embassy, 972 Fifth Avenue, New York, New York, 10021. At much greater expense, usable either as teaching or as enrichment aids are the "packages" consisting of manuals, workbooks, films, filmstrips, and tapes of Encyclopedia Britannica Films ("Je parle français"); "Aspects de France," Modern Language Aids, Inc.; "Learning French the Modern Way,." (McGraw Hill Co.), the extensive materials made in France by Didier and distributed by the Chilton Co., etc. Widely used throughout the U.S.A., these materials, if properly studied and implemented, can become the basis of exciting and efficient study of the French language and culture.

Evaluation Techniques. Each unit is specific in this area, for example, Unit 40, French, lists no less than eight techniques for evaluation for the work accomplished in this unit. Each unit in Latin also lists from two to five evaluation techniques. In addition, pp. 8 and 9 in the booklet, "The Teaching of Classical Languages..." list no less than 26 further suggestions.

Part II -- Courses of Study, Foreign Languages, and the Objectives of the Amherst-Pelham Regional School District, Secondary Schools

Overview. While not specifically part of this assignment, it would seem worthwhile to discuss some of the overall objectives of the Amherst secondary school in relation to the courses of study in foreign languages. As stated, many of these objectives have to do with the development of the individual student and the greatest possible progress in his studies according to his own needs, abilities, and motivation. The usual structuring of a secondary school curriculum with its necessary commitment to schedules, rooms, and available teaching staff always makes this a difficult challenge. This is not the place to discuss modular scheduling and similar innovations which tend to make individual pupil advancement more possible. However, some suggestions will be made in the following sections which should be thoroughly investigated and implemented wherever feasible.

It is obvious that the Amherst system of phasing is an important step in the right direction. Not a process which meets the individual needs and abilities of each student, it is a type of assignment by level of ability and interest. While the present assignment to phase levels seems to work rather well, it is strongly recommended that foreign language aptitude tests be administered to all pupils as a part of the phasing process, particularly at the earlier levels of instruction. The validity of the Carroll-Sapon Foreign Language Aptitude Test has been widely researched and demonstrated (Psychological Corporation of America, New York). In promotion from one phase level to another, it is also suggested that some of the better achievement tests be administered (Pimsleur Foreign Language Achievement Tests, Harcourt, Brace and World, Inc.; MLA Cooperative Foreign Language Tests, Educational Testing Service). Such nationally recognized tests are beginning to have norms so that the individual teacher can relate the achievement of his pupils to more general standards than the successful accomplishment of the work contained in a single set of materials such as the A-LM materials presently used in French IV.

Individualized instruction and progress according to each pupil's abilities are possible through the increment learning or teaching machine approach. Materials are now available for language laboratory and classroom which should be thoroughly investigated and implemented wherever possible. The present evaluator has participated in a research activity during four NDEA Institutes for Teachers of French in Secondary Schools, resulting in the creation of materials which are now available commercially. It is recommended that the work of Niedzielski and Mayer, published by Harcourt, Brace and World and Appleton-Century-Crofts be investigated. Also, the findings of F. Rand Morton (Lindenwood College, St. Charles, Missouri) and published by Indiana University, particularly "The Language Laboratory as Teaching Machine" should be consulted. Further details on the above suggestions will be gladly supplied.

Further objectives of the Amherst-Pelham Regional School District such as "recognition of the values and experiences other than those gained in a classroom," "opportunity to pursue independent study programs," "opportunity to succeed," can be realized through some of the approaches as suggested above. For example, as is well known, the process of increment learning provides much self-motivation through the reward of successful accomplishment of each "frame" of a properly devised sequence of units of the segment to be learned. Individual work in the language laboratory and outside the classroom can release the classroom teacher for enrichment programs, further individual and small group consultations, etc.

Part III --Further Recommendations

All members of the teaching staff should be active members of the appropriate professional organizations. Most important would be membership in the newly created FL organization for all teachers of all foreign languages at all levels in the U.S.A., The American Council on the Teaching of Foreign Languages (62 Fifth Avenue, New York, New York 10011). Next in importance is the similar constituent local organization, the Massachusetts Foreign Language Association. The school district should make it possible for all FL teachers to be subsidized to attend the important conferences of these organizations which deal with the most important problems in the teaching of foreign languages and some of the latest methods, materials and techniques. Attendance at the meeting of the Northeast Conference on the Teaching of Foreign Languages is also essential. The next meeting (New York, March 27-29, 1969) will treat the following theme: "Effective and Imaginative Uses of Media in Learning Languages, Culture, and Literature." There will be reports and demonstrations in Modern Foreign Languages and Classics involving non-projected fixed visuals, projected fixed visuals, language laboratories, films, videotape and television.

Also important is attendance at the appropriate individual foreign language association, such as the American Association of Teachers of French. Publications of these organizations should be carefully studied.

The school district should cooperate actively in helping all foreign language teachers to keep up to date through attendance at regional workshops, special summer programs, foreign travel and study, and especially participation in an NDEA Institute (for Classics, an institute under the Arts and Humanities Foundation). These institutes always feature the evaluation and demonstration of new materials, methods, and techniques.

The school district should make it possible for individual teachers to visit other schools and school systems where different materials, equipment and techniques are in successful use. This is particularly important when a decision to change to new materials is in the planning stage. Some of the creators or publishers of outstanding "packages" of materials now urge the prospective users of these materials to attend an intensive workshop before they are actually used in the classroom and laboratory. Example: the annual workshops of the Chilton Co. (Philadelphia) for teachers planning to use the Childton-Didier materials.

The school district should allot a larger portion of its annual budget to the acquisition of important new materials for both teaching and enrichment. Some examples have already been listed in Part I. To these should be added the best series of audio-visual cultural materials now available even though they are fairly expensive. Cultural History Research, Inc. (Harrison 1, New York) has created a series of 30 taped talks on all aspects of French Culture from the caves at Lascaux to 1960, illustrated by a superb set of color slides.

These materials are usable for individual or group work and can be excerpted to illumine almost any aspect of French Civilization and Culture. Now under development are the sound color filmed materials of the Raytheon Educational Corporation. The 150 films in the FLES series, "Je Parle Français" will be re-edited so that the segments filmed in France will create a library of authentic scenes and human cultural situations which could bring alive the dialogues and patterns of most teaching materials.

The "wave of the future" for teachers in any discipline would indicate special training in such new techniques as Leadership, Interaction Analysis, Group Dynamics. Such training is now available in workshops, special courses and at least one NDEA Institute.

Conclusion. It is evident that all work in foreign languages is very well done within the limits of present curricular patterns and materials now in use. Much improvement is possible as is suggested in the foregoing statements. The cost in terms of time, money, and effort will be high but entirely worthwhile.

Evaluation of Curriculum Materials

Mathematics -- Jim C. Fortune

The curriculum materials which were reviewed for this report include (1) courses of study for Geometry, Phases IV and V, (2) Geometry, (3) first course in Algebra, Phases IV and V, and (4) Geometry, Phase II. These materials were developed as an enabling objective to the implementation of a major program of individualized instruction in the Amherst-Pelham Schools.

In order to properly evaluate curriculum materials there is the necessity to identify the purposes for which the materials are intended to be used. These purposes provide the structure through which practicality and appropriateness of the materials can be judged. The summer Curriculum Project Guidebook lists seven uses for the curriculum materials, namely:

1. guide the daily work of each teacher as he adjusts the instructional program to the needs and interests of his individual pupils,
2. guide the daily efforts of individual students, particularly those who are proceeding at a different rate or who (through rephasing or some other process) are at a different point in their studies than their classmates,
3. provide a method of preserving the planning work of talented teachers,
4. provide needed orientation for new teachers,
5. provide administrators and school committee members with documents by means of which the scope and value of particular instructional programs can be judged,

6. provide teachers with documents that can be useful in attempts to increase the coordination among different courses, and

7. provide a basis for the continual revision and improvement of the instructional program.

The curriculum as determined by the materials must be evaluated in terms of the overall project objectives as are stated in the guidebook, the objectives and philosophy of the school district as are described in the Teachers' Guidebook #2 (1964) and the instructional policies of the school district as are described in the Teachers' Guide #3 (1965).

In this evaluation two major questions were asked about each curriculum guide, namely: (1) Were the materials developed in the form to meet the seven stated purposes? and (2) Is the content of the materials clearly in keeping with the objectives of the project and of the overall school district policy?

The first evaluation was made using the following structure:

Organization.

Table of Contents.

Subject Matter.

Concepts and Attitudes.

Specific Objectives.

Teaching Methods.

References and Aids.

Evaluation Techniques.

The second evaluation was more global in nature and sought to visualize the materials in the light of the nine project goals. A third section of the report will include general recommendations for improvement of the materials. Each curriculum guide will be analyzed and discussed individually.

Course of Study for Geometry
Phases IV and V

Organization

Overall, the organization of this curriculum guide is excellent. The guide contains eleven well-defined units. Each unit includes an overview, an approximated duration, differentiated concepts for both phase IV and phase V students, specific objectives for phase IV students with additional objectives for phase V students, a methods and aids section, and an evaluation section. The overviews, concepts sections, and specific objectives are very well developed. Brevity of the methods and aids section and of the evaluation section may, however, limit the usefulness of the guide.

Table of Contents

The table of contents includes the unit titles and page numbers in appropriate form. The unit titles adequately describe the materials for each unit.

Subject Matter

The subject matter of each unit is described in a brief and interesting manner in the overview section of the unit guide. These overviews tend also to give the teacher some concept of the particular emphasis that should be placed on each unit. Certainly, this section should be very useful in guiding daily teacher efforts and in determining the expectancy of both student and teacher efforts and in determining the expectancy of both student and teacher of the unit outcomes. The overview does adequately establish an instructional set and is one of the strongest parts of the guide.

Concepts and Attitudes

The curriculum guide is designed to reflect the broad ideas of each unit in the form of a series of stated concepts. These concepts, as a whole, are clearly written, differentiated for the two phases, and appropriately reflect the content of the unit. Generally, the broad ideas described provide a useful insight into each unit. Only a few of these concepts, however, reflect lasting attitudes which are also appropriate goals. Would these broad ideas allow a student to become anti-geometry? Are there not some broad attitudes which are appropriate to each unit?

Specific Objectives

The specific objectives are generally stated in behavior terms and most include or imply criteria for observation. The objectives are clearly and appropriately designed for specific phases and are stated so that terminal behaviors become the focus of each objective. If criticism of this section is in order, perhaps the objectives do not grow in complexity rapidly enough to allow for assurance of the broad ideas. Much of the integration of specific objectives into broad ideas is left up to the student. These objectives, however, should prove very useful in determining methodology and evaluation criteria.

Teaching Methods

In the section entitled Methods and Aids, types of instructional sequences were named, but not described. The guide would be more useful if method of instruction and content were interrelated or if method of instruction and specific objectives were paralleled. From the methods and aids section it could be inferred that each content area of the unit was treated in every manner. Perhaps this section could be made adequate by describing briefly where and how the students become acquainted with each definition or operation, for example: the union of two sets was described in a lecture, shown by Venn diagrams on the overhead, and worked with independently in the solution of several problems.

References and Aids

The sections Methods and Aids generally list the references, but in a manner that they are undistinguishable from methods. The aids and references are useful and appropriate, but should be easier to identify.

Evaluation Techniques

The Evaluation sections of the guide are not useful in the form in which they have been developed. A general listing of evaluation techniques at the end of each unit does not identify which techniques were used to ascertain which terminal behaviors. Evaluation criteria were adequately described in the specific objectives and the advantage of these well-written objectives should be taken to develop a strong evaluation section. Specific objectives could be grouped under each stated technique and concise statements could be made describing the manners in which the technique was utilized, for instance: blackboard observation was used to determine (1) the ability of the student to bisect an angle, (2) to bisect a line, and (3) to construct a parallel line. A quiz concerned with sums of angles in closed figures was used to determine terminal acquisitions for theorems x and y.

The curriculum guide is compatible to the project goals in that: (1) a careful attempt has been made to differentiate curriculum to individualize goals of students in phases IV and V, (2) latitude for individual student creativity has been allowed, (3) appropriate content and meaningful terminal behaviors have been selected, and (4) generalizable concepts meet with the overall school philosophy. There appears to be a lack of concern for general attitudes toward methematics; however, these are implied even though not stated. Some description of phase IV students parallel to that of phase V students is needed.

Certainly, one recommendation for improvement of the guide can be made in terms of revision of Methods and Aids and of Evaluation. Both of these sections need expansion and specificity for maximum utility. Brief examples of aid material and of evaluation material would also be helpful, although not essential.

Course of Study for Geometry
Phase II

Organization

The course of study has been organized in a useful, easily referenced manner. After a general introduction, a note to students (which could probably be better addressed to the teacher who will utilize the guide), a study guide (which probably should have been offered as a suggested handout) and a battery of examinations (which, again, should have been portrayed as suggested materials or examples), fourteen units were described. Each unit contained a title; a brief, but useful, overview; a suggested method and activity; an evaluation mode; a statement of concepts which were very well formulated; a set of specific objectives; and a proposed criterion examination. There was no attempt to estimate unit duration. The course of study, moreover, was geared to a specific textbook. This, in all probability, is the most limiting characteristic of the materials. The curriculum guide should prove very helpful for the teacher using the specific textbook of reference. The general usefulness of the guide would be very seriously limited by this approach; however, the concepts and specific objectives would maintain generalizable value.

Table of Contents

The table of contents does list each unit with a descriptive title and a page reference.

Subject Matter

Generally the subject matter is discussed adequately in the overview for each unit and specified beautifully in the specific objectives. The overviews are concise and are, generally, well done.

Concepts and Attitudes

The concepts and attitudes are adequately expressed in the concept section for each unit. There was no attempt to separate concepts from attitudes;

however, this distinction appears as trivial to the overall function of the guide.

Specific Objectives

The specific objectives have been expressed in behavior terms and are specific enough to be meaningful. There has been no attempt, however, to express minimum level of acceptable performance and the conditions of the objectives are omitted. An example of the lack of completeness of the behavior objective statement can be seen in the first specific objective of unit 2, define "set." An acceptable terminal behavior might be to describe a "set" as a predisposition as can be seen in psychology rather than the mathematical definition. Definitions as terminal behaviors should be geared to specific frames of reference and to minimum levels of acceptability. There is also a needed grouping of specific objectives to general concepts.

Teaching Methods

The absence of a method tie to a s~~et of ob~~jectives limits the usefulness of the guide considerably. However, the methods are varied over the units and activities which seem helpful are suggested.

References and Aids

The course of study is geared to only one text and supplementary materials including aids are treated superficially in the methods and aids section of each unit. There seems to be a lack of aid alternatives and the simple listing of appropriate aids is inadequate.

Evaluation

Modes of evaluation and suggested test materials are given with each unit. These evaluation modes could use a statement of explanation concerning suggested usage. The test materials are appropriate as suggestions and appear to be of a helpful nature.

The course of study has been developed for only one phase of geometry student and appears to be compatible to the school district philosophy. There is, however, some evidence of rigidity that can be seen in the lack of opportunities left for student decision making and content selection. The second paragraph of the general overview is awkward and could be improved through a positive approach.

There exists so general a concern that the guide should have been developed for a multiple textbook usage. The single textbook approach limits the usefulness of the study guide. The testing materials should be offered as alternatives which may or may not adequately meet the criteria level set by student needs. General improvement could be made through use of multiple textbooks, more specific data on methods and aids, and completion of the behavior objectives.

Geometry

Organization

Perhaps the appearance of a course of study is not indicative of its contents; however, the appearance is definitely related to the utility of the course of study. This course of study did not have a title sheet or any explanatory materials to aid the reader in its usage. There was a page of discussion of phases II, III, and IV; however, this page did not orient the user to which phase the materials were directed or to what role this brief and somewhat confusing discussion of phases should play in the course of study.

Unit divisions for the curriculum were attempted, but not treated in a consistent manner. Units 1-6 apparently referred to the first six chapters of a SMSG text; however, objectives, concepts, and methods only appear for unit one. The next five units merely contain text examples as a description. Units 7-17 have been developed in a more consistent manner, but are still loosely organized. Most of these include attempted coverage of the overview, concepts, objectives, teaching methods, and evaluation. These, however, lack consistent quality and clarity. No attempt was made to estimate unit duration. Usefulness is quite limited (only to those who can read the writer's mind or are familiar with the system.).

Table of Contents

The table of contents, although present, is not functional in that pagination is omitted and structure (especially for units 1-6) is not consistent.

Subject Matter

The subject matter was discussed in the form of twelve overviews. Units 2-6, however, do not contain overviews and references about the subject matter for these areas must be inferred from the testing materials. For the most part, the overviews presented are adequate.

Concepts and Attitudes

Again, only twelve of the seventeen units contain any information on concepts. There is no treatment apparent of attitudes. The concept section is concerned only with the major concepts and could be expanded to include relevant, but not totally apparent, broad ideas.

Specific Objectives

Twelve of the seventeen units contain sections with specific objectives. These specific objectives, however, fail to designate the intended audience. There is no attempt to differentiate between levels or phases of students. The conditions given for each behavior objective are generally ignored and the acceptable level of performance is not designated for most of the objectives. Behavioral terms have been properly used for eighty percent of the objectives; however, there appears evidence that the objectives do not exhaust the expectancies of the unit (this can be seen in the test examples).

Teaching Methods

Four of the seventeen units contain some statements about teaching methods. In the other thirteen units, methods are ignored or reported to be the same as the previous unit. The four cases of teaching methods do not offer any comprehensive insights into the development of the objectives. There is no attempt to refer to teaching method alternatives, to tie methods to objectives, and even to describe briefly the methods. The existing statements about methods can be classified as cues and are not very helpful without expansion.

References and Aids

Apparently this section was ignored for specific units and only one page of general references (without any referents) was generated. The lack of linkage with the remainder of the course of study destroys its potential usefulness and the sarcasm on aids hinders rather than helps.

Evaluation Techniques

Evaluation techniques are omitted for most of the units. There is no attempt to evaluate in terms of the specific objectives or to describe a system of evaluation for each unit. The examples of test material show one dimension of evaluation that is adequately developed. This dimension is not very useful without some added explanations and linkages.

Generally, the course of study does not reflect the carefulness, comprehensiveness, and concern for individual students that is expressed in the program goals and in the school district philosophy. The curriculum guide shows some signs of rote production and fails to define clearly the components necessary to serve its purpose.

Although the material is appropriate, care must be taken that proper designation be made between kinds or levels of students. A more thorough analysis of the content must be made before improvement of the materials can be effected. A consistent approach to each unit would be helpful to the user, but is not necessary if other functional means of communication can be developed.

First Course in Algebra
Phases IV and V

Organization

Generally the course of study has been organized in a utilitarian manner. The curriculum guide consists of fifteen well-structured and comprehensive units. Each unit is described by a section for concepts and attitudes, for subject matter, for specific objectives, for methods and aids, for evaluation techniques, and for references. The organization is consistent over units and a helpful introduction is given. There has been, however, no attempt to identify unit duration.

Table of Contents

The table of contents contains both descriptive titles and pagination of units. It has been well done.

Subject Matter

An outline of unit content was used instead of an overview section for each unit. This outline, however, is clear, contains the essentials of the unit, does adequately describe the content to be used, and fails only to communicate the tone or tempo of content utilization. The outlines are definitely adequate to fulfill the content description purposes.

Concepts and Attitudes

The concept and attitude section of each unit was successful in demonstrating the broad ideas in an overview format. These sections appear both appropriate and usable. Each adequately expresses the major thrust of the unit in terms of both broad concept and attitude.

Specific Objectives

Basically, the specific objective sections are developed around unit content rather than broad major concepts. Perhaps the specific objectives are too precise to be of maximum usage. The simplicity of the specific objectives does not allow one to see the major concepts in formulation. An excellent job has been done in stating objectives in behavioral terms; however, audience (are they for phase IV or for phase V?), conditions (in the classroom, at the board, etc.) and degree (level of minimum acceptable performance) are not clearly communicated. These objectives need expansion for maximum usefulness.

Teaching Methods

Although some variety of recommended methods and procedures appear over units, the methods and aids section does not adequately describe methodology for maximum usefulness. Some attempt should be made to relate specific objectives to methods and methods to location of use within the unit.

References and Aids

Individual references and aids are listed for each unit in the reference section and in the methods and aids section. Adequate source materials are provided and usefulness can easily be assumed.

Evaluation Techniques

Techniques for evaluation are listed for each unit. There has been no attempt, however, to relate evaluation to specific objectives or to methods. The suggested examples of test materials are helpful, but the utility of the evaluation section depends upon the development of brief statements concerning the time and place in the unit for the application of an evaluation technique.

With the exception of unclear differentiation of curriculum materials over the two given phases (IV and V), the curriculum guide does exhibit characteristics compatible to the project goals and in keeping with the school district philosophy. The content is appropriate, the concepts and attitudes are desirable, and the workmanship is comprehensive and of quality.

Expansion of the specific objectives to distinguish between the needs of phase IV and phase V students would be the suggested avenue for greatest improvement. Approximations of unit times are needed and both methods and evaluations need expansion and better description in relation to the specific objectives.

In Summary

The curriculum materials, although not in final form, represent a proper and effective step toward instructional improvement. The project, although large in scope and filled with problems due to its uniqueness, offers great potential for better instruction. The opportunity to review these materials has been a pleasure and the criticisms directed toward the materials are made with improvement in mind.

Evaluation of Curriculum Materials

Mathematics -- J. Franklin Fitzgerald

This report is written after a reading of the following materials. The greatest attention was given to the four courses of study.

1. Summer Curriculum Project
2. Objectives and Philosophy
3. Efficiency in Our Schools
4. "Objectives of the Amherst-Pelham Regional School District"
5. Preparing Institutional Objectives
6. Courses of Study
    a. Phase One Seventh Grade Arithmetic
    b. Grade Seven SMSG Mathematics
    c. Eighth Grade Mathematics
    d. Phase One Eighth Grade Arithmetic

The evaluation report is in several parts. The first is a general evaluation of the courses of study according to school objectives, project objectives, and the courses of study content. The report continues with a more detailed evaluation of each of the four courses of study.

First, here are a few comments on the courses of study relative to the objectives of the Amherst-Pelham Regional School District. The first three objectives seem to mean that each child should progress according to his ability in a curriculum designed for him. The courses of study indicate a typical beginning in such a direction. For a given year (grade) there seem to be two basic curricula. Both curricula seem to make some provisions for group differentiation through content emphasis. No time schedule is given to indicate relative time emphasis on content. No indication is given as to how a student can make a transition from one phase to another. Indeed, is the word phase desirable since the student does not pass through several phases? The word seems to mean the same thing as the word track, which is typically used. If the objectives are interpreted correctly, the instruction should be such that students can progress in the curriculum even more independently than is implied by the courses of study. The courses of study reveal recognition of the varied abilities of students. Just what the children of various abilities can accomplish does not seem to be known. Generalities such as "the easier word problems are best for the lower phases" seem to be indicative of what is known about the abilities of the pupils. Of course all reference sources make such statements. But of what value are they? The phase one guides propose lower limit expectations which is a good idea, but one wonders what is the justification of the limits. Also what happens if the lower limits are not met? There does not appear to be any guide to why the content was chosen. In other words, what are the needs of the students? This question seems to be answered by mathematicians only at this time. They may have the answer as much as anyone. But no one is showing how their ideas are consistent with goals of education.

The objectives four through six seem to pertain to pupil responsibility and experience other than formal classroom instruction. The curriculum as given seems to be oriented to typical classroom instruction whereby the teacher gives instruction and the pupils follow up with practice. There is no obvious implication of students pursuing problems individually.

Objectives seven through nine pertain to motivation and evaluation. There is no indication of provisions for self-appraisal. Also, apparently, the pupil is not given an overview which cites objectives. There does not seem to be a "contract" of what is to be accomplished and what has been accomplished.

The above comments have been made on the basis of an interpretation of the nine stated objectives and the four curriculum guides. The objectives seem to imply complete individualized instruction but the guides are not designed for such instruction. They seem to be designed for two curricula starting at a given grade level with classes determined by ability grouping. This permits some instruction based upon ability but is not true individualized instruction. One questions if the objective of true individual instruction is possible with today's materials of instruction and personnel.

The evaluation techniques, when given, are traditional. They stress skill attainment. The evaluation of concepts is not stressed. Indeed, what are the broad concepts that the school system is seeking? There seems to be no direction for the courses of study relative to the overall purpose of the school system. Hence, any concepts or attitudes that could be given in the course of study would necessarily be mathematics oriented and not child or curriculum oriented. In general, no concepts or attitudes are given in the courses of study.

The second aspect of this report is to comment upon the courses of study relative to project directions. The guides are organized by units. Not all units have titles. The lack of titles hinders reading since one has no orientation from the beginning as to the nature of the unit. There are no suggested time schedules for the units. Each course of study has a table of contents. One furnishes no overview of the content to be taught while one is very specific. A uniform standard for all guides would have been desirable.

The guides do not give an overview of the subject matter for the unit. Half of them do give an overview of the broad ideas of what the students should grasp. Attitudes to be developed are not specifically given. To be sure, many attitudes should be developed. They include the need for correct language and structure, and the ability of mathematics to approximately describe the world as we see it. These do not seem to exist.

The courses of study do give specific objectives. The guides give the lower limits of attainment for each of the four phases. Most objectives lack the specificity that would be needed to write evaluation items. Most objectives are written in such a way that the curriculum could exist at many levels of attainment. The specific objectives tend to be skill oriented.

Teaching methods range from none to suggestions for teaching a specific topic. Vague statements such as "clearly explain the unique factorization property of whole numbers" occur too frequently. What specifically is to be explained is not clear. The teacher who already knows what is to be explained and how, does not need the course of study. The teacher who does not know will not get the necessary help from the guides.

The references are in most part unimaginative. They tend to stress fundamentals in standard fashion. With the exception of one guide, no references other than standard texts are included. One guide does give specific problems to be found in sources other than the textbook. The overhead projector is mentioned frequently as an aid but seldom an explanation of what to do with it.

The third aspect of this report is general comments upon the content of the courses of study. The major concern is with mathematical errors. The greatest collection of errors pertain to distinction between concept and symbols for the concept. While students should not be burdened with the distinction, the materials the teachers use should make the distinction clearly. This is particularly true after comments have been made about such distinctions existing. There are also definition errors and statement errors. The errors come about when statements are given without the necessary qualifications. These errors are typical of the kinds found in mathematics teaching prior to contemporary emphasis on precision of language.

There is a question as to how up to date the phase one curriculum proposals are. Certainly the proposals should include more than they do on both geometry and algebra. Both of these subjects should be included from the beginning of the seventh grade. The arithmetic review work could be an integral part of both subjects. Work on precision requires extensive arithmetic work. The evaluation of formulas could also be a basic for arithmetic review. All students need some knowledge of negative numbers. The phase two through four seventh grade material would also benefit by work on integers from the first of the curriculum. Elementary students are getting some work on integers and it should be continued.

In summary, the project does not give the most essential ingredient for constructing a course of study. The goals of the school system seem to be lacking. What should the student have in the way of general concepts, skills, or attitudes upon completion of the junior high school? For what does the school exist? The objectives given indicate how the student is to be treated in obtaining these unknown goals. The people who prepared the proposed courses of study are left to work in a vacuum since there are no overall school goals to obtain through the medium of mathematics. The project objectives propose an organization for the course of study but no direction on what is to be accomplished in the transmission of knowledge. Hence, the courses of study propose mathematical skills or content to be achieved by students. Concept and attitudes are given a very minor role. The stress should be reversed because the skills or content are not as useful in adult life as the concepts and attitudes.

The courses of study are not particularly useful as they now exist. After appropriate guide lines are established, a worthy course of study may require as much as eight hundred hours for its construction. Hence, the work that has been done to date would constitute an exploratory effort. Now that some good ideas have been conceived, they should be developed in detail. Again this means school goals must be established first. Then the mathematics specialists can translate these goals into ones related to mathematics and can choose mathematical content which will help to achieve the goals. Specific or terminal behaviors should then be established which will define student behavior when the concepts, skills, and attitudes have been obtained. The methodology for presenting the content to obtain the concepts, skills, and attitudes needs to be given with due consideration to the findings of psychology. The evaluation of skills is relatively easy. The evaluation of concepts and attitudes must be explored.

All of this requires very demanding work of a team of knowledgeable people over a long period of time. The Amherst-Pelham Regional School District is to be commended for its financial support of such an exploratory project. The people who prepared the courses of study have produced a considerable amount of material. It should be possible to relate most of it to needed school goals. The work should be continued with particular attention to attitude, concepts, and skills.

Curriculum Guide for Phase One
Seventh Grade Arithmetic

Organization. The course of study is organized in a formal manner. There is a table of contents with page references. A unit approach is used with focus upon an area of content. Each unit is subdivided into sections which include general concepts, goals, skills, teaching methods, teaching aids, and references. Many units include a sample test.

Table of Contents. The table of contents gives the general organization of the course of study. The units have very brief titles which are descriptive of the units.

Subject Matter. The subject matter could be given in a brief overview at the beginning of each unit to orient one's thinking. The intended subject matter becomes obvious as one reads the unit. The writing in the course of study needs to be redone for greater precision of expression and greater accuracy of content.

Concepts and Attitudes. Concepts are indicated. They could be made more specific and more numerous. Attitudes need to be considered. The skills, concepts, and attitudes must be included in any course of study. They are the foundation for everything suggested in a course of study.

Specific Objectives. The specific objectives are generally stated in behavioral terms. They are usually given specifically enough to permit evaluation questions to be written. The practice of writing lower and upper limits is good. They furnish a control for the phase in which the student should be. The objectives are oriented to skills or content mastery and not concepts and attitudes. Of the various sections of each unit, the objectives seem to be best.

Teaching Methods. The teaching methods consist of generalities which are common sense. They should be more specific to include time factors and particular activities for concept development. The activities should be coordinated with subject matter; concepts, skills, and attitudes; and specific objectives.

References and Aids. The practice of giving specific references including page numbers is good. More references should be given, particularly ones that are more up to date. Many of the available experimental or special project materials are appropriate for enrichment. The references and aids should be keyed to pertinent specific objectives. There should be a greater stress on aids for phase one children.

Evaluation. A sample test on content mastery is given at the conclusion of most units. Inclusion of other means of evaluation would be desirable.

Overall, the course of study follows the suggestions for its construction. The best feature is the specific objectives section. There is some strength in the concepts section. The weakest section is on the teaching methods. The methods section does not seem to be very directive but constitutes most of the space.

Improvement could be obtained by attacking a specific concept, skill, or attitude. For a particular concept, skill, or attitude, the content, specific objectives, teaching methods, and evaluation could be given. This approach would give more information than is now the case.

Curriculum Guide for Phase One
Eighth Grade Arithmetic

This guide is essentially the same as the seventh grade one relative to the eight criteria used for evaluation. Sample tests are not a feature of this guide. Since the quality of work is consistent with the seventh grade guide, see comments on that one.

Course of Study for Grade Seven
SMSG Mathematics
Phases Three and Four

Organization. This course of study is highly organized into units and subunits. The table of contents refers one to the various sections of the course of study. Each subunit is divided into a section for what the teacher should do and what the student should be able to do.

Table of Contents. The table of contents is very good. It gives an overview of the course. It is comprehensive and indicates where to find the units in the course of study.

Subject Matter. No overview of content is given but the organization makes the content fairly obvious.

Concepts and Attitudes. The concepts, skills, and attitudes are not specifically given. To some extent they can be read into the written material about what the teacher is to do. But, since everything in the course of study is dependent upon the concepts, attitudes, and skills to be developed they should be given specifically. Objectives, methodology, and evaluation should be coordinated with these three aspects.

Specific Objectives. The specific objectives are good. They give the kind of behavior to expect. They are given differently from those of other courses of study. For example, action is specified for the teacher and the behavior is specified for the student. It is interesting to note that the teacher and student actions are different. The teacher develops a concept and the student responds to an application. This seems to be good even though one might question if the student shouldn't be able to respond also to how the concept is developed. There is differentiation between the objectives for the two phases.

Teaching Methods. There seem to be no methods given. For the evaluator, the course of study is confusing in that it does not lend itself to the guidelines for evaluation. Methods are implied rather strongly in the sections that tell what the teacher does. These sections seem to be a "catch all" by implying content, concepts, and methodology. Hence, one has difficulty deciding what these sections do give. Yet, they are very well done.

References and Aids. Teachers need references to help challenge good students. Indeed good students should have considerable exposure to the literature that is now available to them. There are many paperbacks and other books on mathematics which are written especially for junior high students. Hence, the course of study should include references. It would also include aids which are useful in developing ideas.

Evaluation. Sample tests are given for two units. The ones for geometry are good. The specific objectives indirectly indicate possible test items. Since teachers are usually capable of writing items for measuring content mastery, the course of study could contain items for measuring concept attainment.

The approach used to write this course of study is not consistent with project objectives. While it does not have many of the suggested sections, it does manage to overcome the deficiency reasonably well. Of the various sections for evaluation, the one on specific objectives is best. The many missing sections create a weakness.

The course of study should be improved by giving attitudes, concepts, and skills to be developed. A bibliography of books and articles could be beneficial to both teachers and students. Ideally, attitudes, concepts, and skills to be developed will be specifically keyed with specific objectives, methodology, and evaluation.

Course of Study for Eighth Year Mathematics
Phase Two

Organization. The course of study is organized in a formal manner. The title page could be made more specific by naming the students for whom the course of study is intended. A unit approach is used and the units are focused on chapters of the text. Each unit includes four parts which pertain to materials of instruction, teaching techniques, unit objectives, and evaluation. With the exception of the objectives, the parts tend to be too brief to be useable.

Table of Contents. The table of contents gives the general organization of the course of study. The units should have titles which are descriptive of the contents. Also some explanation of how to find the various sections and units would be helpful.

Subject Matter. The course of study begins with a very brief overview of the subject matter for guides 7 and 8. Each unit should have a brief overview of the subject matter to be covered. This would help to give a focus to the unit and show its place in the overall curriculum.

Concepts and Attitudes. This essential aspect of any course of study must be done. Without it any objectives are meaningless. One page of general goals are given which are written as objectives or suggestions for obtaining them and not concepts or attitudes. While one could perhaps read certain concepts into the work that has been done, no implications for attitudes are found.

Specific Objectives. The specific objectives are generally stated in behavioral terms. They are usually stated specifically enough to permit evaluation questions to be written but not necessarily specific enough to permit advanced specification of the expected behavior. The objectives are oriented to content mastery and not concepts or attitudes. In general, of the various sections of the course of study, the specific objections section is the best.

Teaching Methods. Brief methods are given by suggesting activities. To be useful, more detail is probably needed. Also the suggestions should be coordinated with subject matter; concepts, skills, and attitudes; and specific objectives.

References and Aids. Aids are mentioned usually in two locations.

They should be related to the specific objectives to be achieved. References should be more plentiful, should be keyed to the specific objectives, and should indicate pages of special concern.

Evaluation. The evaluation sections for the units vary from none to examples of good tests. Many of the tests which were to be included were not. In some instances, there were descriptions of the kind of test that should be given. More uniformity for each unit would be good. Also, evaluation is restricted to typical teacher-made tests on content.

Overall, the course of study follows the suggestions for its construction. The best feature is the specific objectives section. The weakest aspect is the concept and attitudes section. Basically they are not given.

Improvement of the course of study should begin with a detailed listing of concepts, attitudes, and skills. These could be made more specific for mathematics through the list of specific objectives which would be expanded to include better descriptions of concepts, attitudes, and skills. Then the obtainment of each objective could be described with content specified and teaching techniques given. This could be followed by giving the behavior that is expected and how the behavior could be elicited.

Evaluation of Curriculum Materials

English -- William Lauroesch

In a sense, literature is the foundation of a truly integrated curriculum. It is not only language, but art and music, history, philosophy, social and political commentary, and soothsaying too. It affords the teacher of English the unique opportunity to sneak in relevance in an institution that is geared to irrelevance. As it relates to this opportunity, literature is both powerful and dangerous.

Its relevance makes it powerful; the danger lies in a temptation to become preoccupied with the extensions of human nature and the human condition which a good novel (or a good poem) reveals or suggests. Lead not to temptation.

The discipline of English, it seems to me, is to concentrate on teaching the reading of literature, that is, to conduct pupils through reading experiences that will systematically carry them to higher purchases. Each new encounter with how an author means is an enabling experience toward what the next author means. The performance criterion, then, is not the regurgitation of what has just been spoon fed, but rather the operational manipulation of the conceptual framework acquired through past reading exercises in the handling of a new reading problem.

This has a lot to do with (1) the selection of raw material (i.e., the novel or poem for class study), (2) the skills objectives, (3) the sequence of reading experiences, and (4) the means for bringing pupils to perceive how an author means.

My access has been limited to a handful of courses prepared for different grades and different phases. This affords no grounds for judgments relating to your efforts to articulate a program. May I assume that you have given attention to sequence, that is, to a hierarchy of literary and rhetorical devices that are the subject matter of the reading of literature? The establishment of such a sequence must, as I see it, occur prior to the selection of works to be studied. Aside from stock considerations of age-level interest, difficulty, propriety of them and language, etc., the criterion for selection is whether or not a particular selection demonstrates what you are trying to teach to a particular group at a particular stage of their development as readers of literature. In this vein I submit that the "great" works do not always make the best raw material for classroom use. Often the weaknesses of a work provide the best raw material for classroom use. Often the weaknesses of a work provide the best teaching material (e.g., *A Tale of Two Cities* for teaching plot construction).

One omission I found pretty much across the board was teaching method. Answering the questions in the study guide may satisfy Mager's requirements, but I'm not sure that it has any mileage beyond that. It can even be harmful. It denies pupils practice in raising their own relevant questions, practice they need if they are ever to tangle with anything of a real substance outside the classroom.

You might find it most valuable--and I'm sure that your new colleagues each year would--to make a departmental bank of methods that have succeeded. Make a section in department files for each work used as raw material, so that teachers may toss copies of their notes, quizzes, etc. into the hopper. Nobody will ever use the stuff as is; English teachers have a proclivity to adapting things to suit their own personalities and purposes.

Attention to method is vital to shake us loose from our own college encounters with the study of literature. Even the good models among college teachers proffer little that we can use in secondary schools. We cannot assume that our clientele is caught up in the magic of literature, nor will they be caught up unless we lead them to the discovery of its riches on their own level.

My comments on individual courses, which follow, are piecemeal and often, it seems to me, picayune. Please accord each item its proper weight. Please be understanding also of my ignorance of the community you serve and the context in which you work. It is my understanding that we shall have an opportunity to meet to talk things over. I look forward to meeting you.

Poetry

p. 1 Overview--Last paragraph is kind of shifty.

p. 2 Concepts--Think 9th grade when you phrase them.

p. 3 Specific Objectives--Fine job a la Mager, except for qualitative dimension; but full of potential for killing poetry if badly handled.
How do you handle these objectives?
How do these objectives develop your concepts, which are just definitions?
Dimensions of phase distinctions don't make sense. I'm not sure you can put 3-5 into one bag.

p. 5 References and Aids--(last item). Telling isn't teaching. Don't stress. Give them a poem they will enjoy.

p. 6 Glossary--Fine, but won't this material come in most texts.

Poems and Study Questions

1. Questions are too general. They seem to extend the writer's thinking, but they do not stand up well alone. A first year teacher would have trouble.

2. Method is teacher oriented. The discussion questions, the quizzes, the tests all indicate a didactic approach.

3. Some of the test questions--and the tests appear to be the most original part of the effort--look promising. Are you trying them out and analyzing the results?

Hie to the Hunters

p. 1 Overview--This hillbilly play grabbed us in the 30's but the "vivid contrast" bit just can't make the scene today. And you don't believe it either. You shout it between the lines.

p. 2 Concepts and Attitudes--Good. You're hitting the Phase 2 level and making it relevant. The sequential development of the C & A's will be helpful to a novice.

p. 3 Specific Objectives--This stuff has appeared in the other courses of study. The following comment applies across the board: The various aspects of the novel are defined in any handbook on fiction. The student who is asked to learn it should be given a context in which to place it, or better, to establish his own context in which to place it. What I'm really saying, I guess, is that a total framework is needed (like teaching kids how to read literature--see General Commentary). Maybe you have it, but it's not in the material here.

The Incredible Journey

p. 2 Specific Objectives--Toward what end are they asked to demonstrate their ability to do these things? (Can you tie each of these to the conceptual framework of your broader objectives?)
Can Phase 2 9th graders handle the comparative works you allude to?
How about teaching methods?

Great Expectations

Overview--Don't get too hung up on genre. Types are still more alike than different.

Concepts--?

p. 2 Specific Objectives (Introduction)--#2 "Listing" doesn't necessarily lead to operational control.

p. 2 Suggested Readings--For the jargon my favorite is Thrall, Hibbard, and Holman, *A Handbook to Literature.* Odyssey, 1960.

p. 2 Teaching Methods--Should be helpful to other teachers, but don't include #5. Somebody might do it.

p. 4 Quiz seems too difficult. Also, it doesn't close in enough to tell you what you'll want to know about their understanding.

p. 6 Can they handle the fall from innocence while they're falling?

p. 7ff Be sure that you don't impose all of Dickens' vocabulary on 9th graders. Many of his words are no longer part of the scene. Sometimes, however, Dickens is good for a close look at word choice. Have them try to determine why he chose the words he did.

Cry the Beloved Country

p. 1 Overview--Novel used as means. Good.

p. 1 Concepts--Really have nothing to do with growth in ability to read literature.

p. 3 Specific Objectives--Going at a work outside the ken of the kids always poses a problem. Developing the historical and biographical backgrounds takes valuable time away from the real job and can delay the start too long.
Consider the interests of 9th graders. Aren't they really more concerned with themselves and people like themselves than in social issues? You may be wasting a good book by using it too soon.

General--Bound as we are to tradition, I suppose this course of study is reasonable. But really, a book is a book. The larger unit is more important than the smaller units within. We kill novels by using study guides, chapter by chapter, with tests all along. Why not give kids a means by which they can look at a

whole book, have them read a whole book, and then employ the means to take it apart (i.e., operation analysis)?
Five weeks is a long time.
Everything appears to be geared to social commentary. Is this English?

Heart of Darkness / The Secret Sharer

p. 2 Concepts--#1 "Consistent style" needs definition.
#2 To the point.

p. 2 1 - 4 (Conrad)--You weren't thinking 10th grade when you did this cut-and-paste job. This kind of nonsense belongs in a college literature course where nobody's pretending to teach anybody anything.

p. 3 #1 This hang-up on kids answering all questions in study guide needs scrutiny. It assumes, of course, that the questions are decent. I wonder, also, if questions are necessary?

Crime and Punishment

p. 1 Overview--If this is their "initial introduction" (sic), it's the wrong book. Even if it weren't their first trip I'd still be inclined to say categorically that it's the wrong book. The profound experience of reading Crime and Punishment is one of the grand prizes awarded to those who have learned how to read literature. Tangling with it before really learning to read literature--even when held by the hand--is enough to make most kids think the reward isn't worth the suffering.

If community ambitions are forcing you to such window dressing, you can still satisfy them with The Red Badge of Courage. If you can beat the commitment to status titles, there are even better selections. The Bridges at Toko-ri, ideally suited to 2 and 3, might be a good starter for 4 and 5. Huck Finn (even if they had it in 4th grade) and A Separate Peace are even better.

These comments apply as well to your selection of Conrad's works. These, of course, they can handle, but they're not the best raw material for teaching the reading of literature, at least not until a great deal of ground work has been laid.

p. 31 I failed.

Spelling

Some might object to an approach weighed toward rules. I don't, at least not in this instance. This unit has a carefully conceived rationale based on systematic word analysis. It provides all the information a teacher needs. It may, however, require kids to master more technical knowledge than the goal--accurate spelling--demands. (e.g., Objectives #2 and #3, p.v.).

p. 2 Instead of asking which organs, why not ask why h is called an open consonant and b, v, d, and k closed.

p. 11 (Stephen) I hope Steve has broad shoulders. He'll get a lot of ribbing.

This unit is woven in a way that makes it possible to test the efficacy of the parts as well as the whole. You need to know whether or not technical knowledge and performance correlate. By checking at each stage you will be able to reinforce the significance of some items and possibly discover the need for rethinking others.

CONCLUDING COMMENTS

I feel compelled at the outset to assure you of my own realization that your project is an ambitious one. Indeed, the search for relevance in curriculum building can at times seem as wistful as trying to get a peek at the Holy Grail. If at times I am tactless in my response to the materials, it is not because I am without compassion.

One thing struck me immediately when I began reviewing the materials--how supportive they are of Henry Brickell's finding in New York State that innovation starts at the top and pushes downward. This is an unfortunate fact of life. Probably what makes it unfortunate is the will to order on the part of the initiators. It is part of their vision, for the products of such efforts must have coherence if they are to have transferable value. But there is a lot of dark ground between Go and Product.

Crossing that ground along a prescribed route augurs little for innovation. It constricts. The product promises to be what we old soldiers call "by-the-numbers." It rigidly conforms, and consequently is likely to lack in imagination.

I keep wondering what teachers would have turned out if left to their own devices. I would expect some dismal failures, but I would hope for some noble failures too, and hopefully from the latter some faltering steps toward an understanding of what high school English is about. Here, of course, I reveal my own bias, which favors process over product. But the commission is to evaluate product, so further digression is not in order.

SUPPLEMENT

After meeting with the English faculty of Amherst Regional High School, I wish to submit the following supplement to my portion of the evaluation of courses of study. Inasmuch as my reactions were in some ways reinforced and in some ways mitigated, I have come away believing that such meetings are a valuable and necessary part of the evaluation process.

1. My statement in the report to the effect that a handful of courses of study afford no grounds for judgments relating to efforts toward articulation was much too narrow. Such documents, especially when restricted to performance criteria, do not communicate enough to give any perspective on the instructional program. Several significant attitudes

and concerns that surfaced during the conference convinced me that the materials I read did not represent the program or the faculty fairly and accurately.

2. Contrary to what I would expect, the English faculty indicated enthusiasm for the curriculum project and revealed their belief that it was born out of genuine concern on the part of the administration. Even though their reservations about the constricting format requirements were by no means mild, they saw the exercises as valuable, particularly in its having raised relevant questions and issues with reference to the uniqueness of English in the school curriculum. They see the endeavor as paving the way to new understandings.
3. While I am in accord with the principle of subjecting courses of study to outside evaluation, I believe that this faculty could have done the job for themselves. In fact, they were doing it through reality testing and being honest and open about their strengths and weaknesses.

They talk to one another, and that is most significant. Their attitudes toward themselves and others are wholesome; they are not grumbling school teacher types. They are at once capable of suspended judgment and strong conviction, although I found them excessively mild in asserting their convictions. I would be for more truculence.

Evaluation of Curriculum Materials

Science -- Ralph Keirstead

The several courses of study, taken together, constitute a plan for providing students with a six year experience in science. In order to achieve maximum utilization of available time, it is most desirable that overlapping of courses and duplication of content be reduced as much as possible. Each course should, ideally, be based on the course which preceded it and provide a base for the course which follows it. When so developed, the science program can provide sequential, cumulative experiences to students. Unnecessary and undesirable repetitions and omissions can be avoided.

It would appear that each course of study may have been developed individually and somewhat in isolation from the others. For example, the content of Unified Science appears to repeat to a considerable degree the content of the course for grades 7 and 8. Certain items in the courses in Biology, Chemistry and Physics appear to be repetitious of items in earlier courses.

It is suggested strongly that the entire science staff be given opportunity to work together for the purpose of hammering out agreements as to the most desirable sequence of topics and of reaching decisions as to the placement of responsibility for developing specific ideas and skills. Questions such as the following are examples of what might be considered by the total science staff.

At what level should the metric system be studied and skill in its use developed? Should the metric system be studied at more than one level? If so, how should the treatment at the second level differ from that at the first? Precisely what understanding about chemical reactions should be made the responsibility of junior high school grades?

It appears that laboratory work by students is planned as part of the instruction in all courses. There does not seem to be a clearly defined role which has been fixed for this phase of instruction. It would seem desirable that the entire science staff discuss the matter and come to agreements as to the purposes to be served by laboratory work.

If laboratory work is to be part of all secondary science instruction, it would seem that consideration should be given to cataloguing the desirable laboratory skills and deciding which grade levels should have primary responsibility for developing these skills. For example, skill in using weighing devices is rather essential in all sciences. In which course or courses, should such skill be developed? To put it in another way, what competence in using weighing devices can the chemistry teacher expect students who enter his classes, to possess? What special skills in using weighing devices should the chemistry teacher be expected to develop?

Perhaps one of the strongest trends in secondary science today is increased emphasis on laboratory work by students. It is urged that the Amherst-Pelham schools give special attention to defining the place of such work in their science programs.

The directive that specific objectives are "the most important part of the course of study" is heartily approved. Undoubtedly, much of the criticism of American science education in recent years stems from the fuzziness and vagueness of the objectives which were presumed to be attained from the study of science. A further directive to those who developed the courses of study is that "the principles outlined in Mager's booklet" be observed. In essence _Preparing Educational Objectives_ defines what is meant by "specific" as applied to objectives.

As one reviews the several courses of study, he is impressed by the great variability which is exhibited in the matter of specific objectives. For a unit of work, the number of specific objectives varies from four or five to nearly forty. There is no reason why there should be the same number of specific objectives in each science unit, but such a wide variation does raise the question as to whether all the objectives are equally specific. It does, indeed, appear that there is considerable variation in the specificity of the statement of objectives. It does not seem that each of the authors of the courses of study has interpreted the directives in the same way. It would be quite desirable for staff members to work together in arriving at a uniform interpretation in order that the separate courses of study be really comparable. Differences of opinion and interpretation among staff members is likely to be reflected in the instructional experiences of students as they move through the science program, unless such differences are resolved.

Each unit of study should contain a section on _concepts_ and _attitudes_, according to the directives for the preparation of courses of study. The directive indicates that these should be "broad ideas" which should have value throughout the lives of students.

There seems to be the same degree of variability in interpretation with respect to concepts as with respect to specific objectives. For example, in the Program of Science Studies for the Junior High School, there appears to be no listing of concepts. At the other extreme, as many as 90 concepts are listed for a sing unit in Chemistry. Some stated concepts do seem truly to be large, inclusive ideas. Others seem to be so narrow as to be mere statements of fact.

It is admitted freely that there can be differences of opinion as to what constitutes the statement of a concept. The important thing is that within a given science program it will be most helpful that there be agreement as to the meaning assigned within that program. It is suggested that the science teachers would find it fruitful and helpful to arrive at such agreements.

Lecture is listed as one of the techniques of instruction in most of the courses of study and appears to be implied in others. In the case of Biology, it is indicated that lecture is used a substantial portion of the time. While lecture is a time honored instructional method, which has demonstrated worth in some situations, there is, it appears, a real question as to its appropriateness for large scale use in the Amherst-Pelham Regional School District. The "non-graded approach to learning in the Junior High School" would seem to call for individualized instruction. Indeed, the introduction to Summer Curriculum

Study states that "a major program of individualized instruction" was implemented in September 1965.

It would seem that the science staff might well concern itself with a review of schemes for teaching for the purpose of identifying those with the greatest potential in the science program to which the school system is committed. Lecture has been used as an example, but similar questions could be asked about other methods.

The writing of reports of laboratory activities and the keeping of notebooks appears to be expected of students in the different science courses. In some courses of study, there are some specifications concerning the format or nature of these. Since notebooks and laboratory work seem to be a feature of all courses, it is desirable that there be considerable uniformity of treatment. Here is another area in which the total science staff could come to agreements as to the purposes served by reports and notebooks and as to the characteristics that such reports and notebooks should exhibit. It would seem reasonable that skill in writing laboratory reports, for example, should increase as the student moves through the program. It is unlikely to happen unless there is a planned effort to make it happen. Too frequently, individual teachers within a department may set quite different standards for laboratory reports and notebooks. When this is true, students are forced to learn new techniques yearly, which is wasteful of time and energy.

It is of interest to note that the layout and format of the courses differ considerably. Undoubtedly, this is the result of teachers working individually. It is not the intent here to imply that there is anything wrong or undesirable in having differences. Rather, it is the intent to ask the question whether there is any one format which may make the course of study more useful than other formats.

As an example, the way in which the Physics course of study is arranged appeals personally to this reviewer. The arrangement of most pertinent materials about a unit of work on a single page, or on two consecutive pages, provides a fine total view. Since it is expected that each course of study will be under constant review and development, the extra pages for "teacher's notes" in Unified Science should prove useful.

While the matter of layout and format of the printed course of study is certainly not of highest importance, it is worthy of attention if it can result in a more practically useful instrument.

Incidentally, the binding used for Physics, Phase 3 hides some of the print. To say the least, this is frustrating to the user. The binding used for Chemistry and Biology courses of study have real advantages.

One directive states, "Each course of study should contain a brief description of evaluation techniques used in each unit." This directive has been fulfilled generally by listing a number of more or less time honored evaluative devices. It would seem that the matter of evaluation should be given much more attention. It is a very large question whether the honored testing procedures are truly adequate in a situation which aims for individualized instruction based on highly specific objectives.

It would seem that it would be most useful to develop, and include in the courses of study, some rather detailed samples of effective instruments and/or techniques.

Junior High School Program

Three courses of study--(1) Natural History and Man, (2) Amherst Junior High School Curriculum Guide (Units on Insects and Seashore) and (3) Program of Science Studies in the Amherst-Pelham Regional Junior High School--were furnished for review. It is not clear how these are to be used. Since item 3 incorporates much of item 1, it is assumed that 1 has been superceded. Item 2 appears to be a much expanded version of two units included in item 3. The purpose for which this is done is not clear to the reviewer. Some comments are directed toward this item.

Since item 3 appears to be the primary guide to the science program for grades seven and eight, special attention is directed to it.

The plan by which students have a range of choices of units for study during grades seven and eight appears, at first glance, to have much merit. Presumably, interest of students would be high and motivation strong since they are studying what they themselves have selected. Under these conditions effective learning should result. More mature consideration raises some doubts as to the desirability of this scheme of organization.

It appears that it is entirely possible for a student to reach the end of grade eight with a highly specialized experience in science. For example, he could take only units which deal with biological materials--or with physical materials. Does not the school have responsibility to see to it that each student has experiences in all the major areas of science? Is the student in grades seven and eight at a level of maturity which makes freedom of choice desirable to the degree apparently permitted?

When one examines the content of any of the units of work, it is apparent that it would be helpful if students entered these with certain prior experiences. However, it appears that students entering, for example, the unit on electricity might have quite diverse backgrounds. One student might have had units on Chemistry, the Atoms and Elements, Energy and a Lab Block related to energy before entering the unit. Another student might have had nothing but biological units. Even with completely individualized instruction it would not seem that these two students could progress with equal efficiency and effectiveness in the unit on electricity.

It is suggested strongly that the organization of grades seven and eight be reconsidered and that the desirability of establishing more control over what may be studied and when it may be studied undergo evaluation. It seems probable that some degree of flexibility can be retained at the same time that some control is maintained over the sequence and breadth of study in these two important years of a student's experience.

It does not appear that any special efforts have been made to build the science work in grades seven and eight on the science experiences that students have in earlier grades. It is assumed that students do come to the Junior High School with considerable experience in science. If this is so, efforts should be made to establish effective liaison between elementary and junior high programs.

The idea of Lab Blocks is an intriguing one. These, it would appear, might be the means by which students could really become involved in doing what scientists do and so, acquire some "feel" for the processes of science. Ideally, these Lab Blocks should contribute to several of the broad goals listed in the introduction to Program of Science Studies. However, the written materials about the Lab Block (pages 30-31) seem quite fixed in nature and not to be designed for the "free wheeling" which seems implied in the Laboratory Block.

Clearly the seventh and eighth grade students are hardly mature enough to be loose to do independent research. Evidence seems to be accumulating from some of the newer curriculum studies that junior high students--and even younger students--can, under the guidance of teachers, identify problems and explore them in a truly scientific manner. The Lab Block idea is worthy of further development. As presently demonstrated, it seems limited in usefulness.

So far as can be discovered, there are no listings of References and Aids for the many units included in Program of Science Studies. This is one of the requirements for courses of study. It is true that References and Aids are included in Natural History and Man, units from which were incorporated in Program of Science Studies. This leaves a dozen or more units without suggestions as to appropriate instructional materials.

The emphasis on field trips is most commendable--especially, since it appears that such are little used, if not non-existent, in other courses in the science program. Since one purpose for preparing courses of study is stated to be providing "needed orientation for new teachers," it would seem desirable that there be included a description of the local conditions which control field trips and rather detailed suggestions for making such trips effective learning experiences.

Reference is made numerous times to "project sheets". If these are specially designed forms for making a report, one of these might well be included in the course of study.

Program of Science Studies, on page 6 describes the general plan for differentiating instruction for students of different abilities. This general plan appears to provide no differences between phase 1 and phase 2. If this is so, should not there be merely one phase? It seems, too, that the differentiation for phases 3 and 4 may be largely accomplished by assignment of greater quantity of work to do. It is likely that the kind of work done might well be different for the abler students.

The directions for preparation of courses of study specify that "objectives and materials appropriate to each achievement level, or levels" should be defined. This appears not to have been done for the units in Program of Studies. It is badly needed in order to avoid uncertainties and capriciousness in providing instruction keyed to the capabilities of students.

In Natural History and Man, it seems that the section on Concepts and Attitudes actually states very general objectives.

As noted earlier, it is not clear to this reviewer what purpose is served by Amherst Junior High Science Curriculum Guide which contains the two units Insects and Seashore. The introduction to the unit seems to be addressed to the student. Some of the materials appear to be textual in nature. It would seem that much of the material is quite readily available in printed form. A great amount of labor has gone into producing the materials obviously. Are there sufficient reasons for extending time, energy and the money involved?

The unit on the Seashore is an interesting one. The title does not seem an appropriate one for the content is by no means restricted to the seashore but includes the broad area of oceanography. Certainly, one of the vigorously active areas of science is the study of the oceans so it should be included in science programs. Since the study of the seashore per se must probably be vicarious for Amherst students, one wonders if there are not inland geologic features which could be studied more profitably.

Senior High School Program

Unified Science

This course of study adheres quite strictly to the pattern suggested in the Guidebook for the Summer Curriculum Project.

From the information given on pages 1-4, it appears that the course is rather highly structured and that there are a number of formal requirements. One gets the impression that the outline on pages 5-10 was the outline of the course as used prior to the curriculum project. The remainder of the course appears to be an adaptation of the older course to the directives of the Guidebook for the Summer Curriculum Project.

There appears to be no provisions for Phase 5 in this course. It seems not inconceivable that there are students in grade nine who should be in this phase. There should be provisions for the most able students at this grade level.

The author of this course clearly devoted much thought and effort to stating the concepts and the specific objectives for Phases 1, 2, 3, and 4. Presumably, the simpler concepts and more easily attained objectives were assigned to Phase 1. Those for each succeeding phase are more difficult. To this reviewer, it does not seem that some specific items have been assigned to the proper level. For example, on page 11, No. 2 in Phase 3 might be assigned to Phase 1. No doubt, both the concepts and specific objectives should be reviewed as the course is taught and reassignment to a different phase be made when that is shown to be desirable.

Reference is made to "special extra credit activities" on page 2. This seems to imply that the success of a student in the course is related to the quantity of work that he does. If this is the case it would not seem to be a desirable practice.

This course contains units which appear to be very similar to those in Program of Science Studies. For example, Unit II seems to overlap Chemistry, the Atom and Elements; Unit III, Human Body I, Human Body II and Maintaining Good Health; Unit IV, Light; Unit VIII, Electricity and Unit X, Astronomy. Examination of the specific objectives in the two courses indicates that many of them are much alike at the two levels. There are also identical elements in the listing of the subject matter.

It is strongly urged that early steps be taken to resolve the overlap and repetition of these two courses. Cooperative review and discussion by teachers in both courses should lead to decisions as to placement of specific items so that students will have a cumulative, sequential learning experience as they progress through the courses.

Physics Phase 3 and Physics Phases 4 and 5

Since these two courses of study are authored by the same person and have the same organization and format, they are treated together here.

As mentioned earlier, this reviewer reacts favorably to the format used by the author of these courses. There would seem to be real advantages to having related items on the same page. To accomplish this calls for hard headed analysis and condensation. This appears to have been done successfully. The section on specific objectives may require so many statements that more than one page is necessary, but, as is shown in Physics, Phases 4 and 5, this can be done without destroying the achievement of a desirable compactness.

It is noted that the references listed in these two courses of study are restricted largely to two textbooks. This would not seem quite in keeping with the avowed intent of the Amherst-Pelham school system to provide individualized instruction and to encourage independent study.

It is an interesting feature of Physics, Phases 4 and 5 that chapters from a textbook are used as the unit of organization. Probably this is justified when the instruction is based on a highly structured course such as PSSC is.

By and large the statements of specific objectives in these two courses of study seem quite well stated. As in all other courses of study, these should be further reviewed and revisions made when any objective is found to lack specificity. In particular, it would be well for all teachers involved with physics, including those from the lower grades, to review these together.

It is obvious what several of the courses preceding Physics deal in one way or another with the ideas and phenomena with which these courses are concerned. Once more it is urged that there be discussion among the teachers involved to bring about good liaison and cooperation for the purpose of eliminating overlapping and repetition.

Chemistry Phases 4 and 5

The lack of page numbers makes this course of study somewhat unhandy. It is noted here that the copy for review contains only Units I-V. It is assumed that the development of the course is incomplete.

The preface, overview and foreward seem very well done. They give a rather precise and definitive picture of the course. One cannot but be impressed by the evidence of hard thought and analysis that clearly was involved in producing the sections on Concepts and Objectives.

The general comments about the total science program include a section about concepts. Since the sections on concepts in this course of study are elaborate, indeed, some further comment may be in order. Going back to the directives in the Guidebook on the Summer Curriculum Study, it is noted that concepts are defined as "broad ideas" which, if comprehended, could have lasting impact on, and value to, students. To this reviewer, concepts might be considered to be those "big" ideas which provide a defensible reason for teaching a given course. For example, the idea that matter (stuff) behaves in an orderly fashion is a concept and is a mighty useful idea to understand whether a person is a professional scientist or not. The idea is "broad" for it encompasses a multitude of phenomena. It is of quite a different order of magnitude from such a statement as "The standard unit of length is the meter."

It seems to this reviewer that in most units of work in science there are only a few underlying concepts--at least, as interpreted above. Thus, it is suggested that a review of the concepts listed in Chemistry, Phases 4 and 5 might be desirable. It seems that many of the listed "concepts" are more properly designated as facts or definitions. They might possibly be more appropriated in some other section of the course of study.

The specific objectives seem quite well stated in the majority of instances. Most of the statements are sharp and specific. Also, it appears that the differentiation between objectives for Phases 4 and 5 is good. Of course only experience in using the course of study will conclusively determine whether the more difficult objectives have, indeed, been chosen for Phase 5.

Each of the courses which precedes Chemistry, Phases 4 and 5 has units or parts of units which are concerned with chemical ideas and phenomena. There seems to be nothing in this course to indicate any recognition of this. In the interests of better utilization of the time and energy of students, it is urged that this matter be studied so that unnecessary repetition ~~can~~ be avoided.

The comments about skills and the need for samples of worksheets and other forms made concerning other courses apply to this course of study.

Biology Phase 4

This course of study contains, for each unit a section labelled, "Skills." It is certainly true that, as a result of the study of science, a student should develop certain skills. Those which are uniquely necessary for science are rightly the responsibility of science teachers. For example, the development of capability to use effectively a compound microscope is surely a responsibility of science teachers. It, then, becomes a specific objective and might well be so listed.

Some of the skills listed are very general and surely not the special responsibility of science teachers. "Ability to use library reference material" is an example. In cases of this sort there should be a consistent approach to developing the skill. This involves collaboration among the several subject matter departments as well as with library specialists.

Other skills listed are general to all areas of science. An example is "ability to record laboratory experiments." When and how to develop the skills needed specifically by science students should become the concern of the entire science staff. Each individual may well have a role to play but this should be determined after discussion and study of the matter by the total science staff.

Some of the so-called "skills" which are listed are the kinds of intangibles that are difficult to assess. "Appreciation of - - - -" is hardly a specific objective.

In the sections headed "Methods and Aids" certain percentages are listed after such instructional techniques as discussion, laboratory and lecture. It is assumed that these represent the estimated distribution of time used for these methods. If so, the total emphasis on lecture seems open to question, especially since the course seems based on one of the versions of the Biological Science Curriculum Study.

Reference to Program of Science Studies and to Unified Science show that each has a considerable emphasis on biological science. There does not seem to be any clearly established relationship between these early courses and Biology, Phase 4. It would seem that students entering Biology, Phase 4 must have considerable biological knowledge that should be utilized as a base for Biology Phase 4. The fact that some of the specific objectives and the subject matter listed are quite similar to those of the earlier courses seems to indicate that more collaboration and joint discussion among the teachers of the several courses which involve biological materials is highly desirable.

A number of the objectives listed appear to be in need of revision to sharpen their specificity. Some of the objectives are stated in such terms as:

"to be able to demonstrate knowledge---"

"to be able to diagram the -----------"

"to be able to discuss ---------------"

When objectives are thus stated they are subject to more than one interpretation and so lack the kind of specificity that seems to be desired, as indicated in the directives for the Curriculum Project. It is suggested that it would be a fruitful exercise for all biology teachers, or all teachers who deal with units based on biology to review the objectives. When a teacher works alone, it is easy to miss interpretations that others might perceive.

References are made to "work sheets." It is not clear whether the inserts following Unit XII and Unit XIII are examples of these. Whatever the purpose of these inserts, it would be helpful if it were clearly stated. It would be desirable to have samples of all special forms used in the course appended.

Apparently, each student is expected to become involved in an individual research project. The course of study does not seem to include a description of such. Since it is assigned for a half-year effort, it would seem most desirable that a detailed description be included in the course of study. If other courses in the science department also make use of this instructional technique, it would be well to set some departmental standards for research projects.

While it may not be of crucial importance, it must be noted that the lack of page numbers makes the course of study somewhat difficult to use. Also, there are a considerable number of typographical errors which are bothersome.

Since no reference is made to any phase but 4, it is assumed that other courses in Biology exist for other students and that courses of study for these have not yet been developed--at least, in the format established for the curriculum project.

⑤

An Evaluation of Eight Courses of Study in English

J. T. Sandefur

The Amherst-Pelham Regional School District is to be commended for the concern for effective instruction which is both expressed and implicit in the Summer Curriculum Project. Having taken a position that instruction, to be effective, must make provision for individualization, be relevant to the needs and abilities of the learners, specify instructional objectives in behavioral terms, and validly measure the extent to which the aforementioned has been accomplished, the School District initiated an action program which has resulted in the development of eight courses of study designed to accomplish these objectives. This evaluation is focused on the extent to which the individuals involved have succeeded in fulfilling the purposes and intent of the Project.

The Evaluator, having had no involvement in the conception or conduct of the project, has been faced with the major problem of objectively evaluating the curricular materials as they relate to the philosophy and objectives of the Summer Curriculum Project without inserting personal biases. Therefore, it seems appropriate to restate the rationale of the Summer Curriculum Project as it has been understood by the Evaluator. The rationale of the Project has been followed by an explanation of the evaluation criteria.

The Rationale of the Summer Curriculum Project

To paraphrase Teachers' Guide #2, "Objectives and Philosophy," published by the Amherst-Pelham Regional Schools, the Schools would support the concept of the inherent worth of the individual and his practically unlimited potential to contribute to society and to achieve worthwhile personal goals. In order to effectively achieve the societal and individual goals, the schools must assume responsibility for affecting the mental, emotional, and physical development of every student. The expressed philosophy of the Amherst-Pelham Schools would deny the value of certain conventional school practices such as chronological grouping, lock-step curricula with vague, non-specific objectives, as being influencers of desirable student behaviors. They would, instead, stress the values of individualized instruction with specified instructional objectives stated in terms of desired behavioral outcomes. The student should have the freedom to move through curricular materials that have been selected in terms of his needs and abilities at his own rate. Furthermore, he should be evaluated in terms of his observable behavior. As a direct result or outgrowth of this philosophy, The Summer Curriculum Project was initiated in September, 1965, with the following general objectives, again paraphrased, for individualizing instructional programs:

1. To provide an instructional program that minimizes the relationships between the chronological age of the student and his curricular placement.
2. To provide an instructional program that establishes the greatest possible relationship between the student's needs and abilities and his curricular placement and allows him to pursue his studies at a rate commensurate with his ability.

3. To provide a curriculum that recognizes the value of experiences other than those gained in formal classroom situations.

4. To provide students opportunities to pursue independent study programs apart from formal classes.

5. To provide each student a major share of the responsibility for directing his own educational program.

6. To encourage each student to develop an inward motivation to learn (as opposed to external motivation such as grades, adult approval, and promotion).

7. To provide each student an opportunity to succeed at a level of achievement commensurate with his interest and ability.

8. To provide a meaningful and realistic appraisal of the achievement of each student who participates in the instructional program.

The teachers who participated in the project by preparing courses of study were instructed to prepare the instructional materials specifically with one or more of the five achievement levels or "phases" in mind:

Phase 1 - for students needing special assistance, often remedial in nature

Phase 2 - for students needing an emphasis on basic skills

Phase 3 - for students with an average background of achievement

Phase 4 - for exploration in depth

Phase 5 - for students with an average background or achievement and self-motivation

Perhaps the key statement defining the responsibilities of the teachers preparing the courses of study for the highly individualized instructional program was found in the Teachers' Guide #2, "Objectives and Philosophy," on page 2.

> Thus, the teachers involved with these courses cannot simply prepare one instructional plan that will fulfill the needs of all pupils. Rather, they must prepare courses of study that define the objectives and materials appropriate to each achievement level or phase. In addition, the objectives for each achievement level must be defined far more carefully in terms of pupil behavior or performance than might be necessary in less individualized programs so students who pursue their studies at a faster or slower rate than the "average" rate can utilize these carefully defined objectives to guide their own efforts. For example, the student who wishes to request permission to attempt to "test out" of a course certainly has the right to expect that he will be provided with a list of the specific objectives on which he will be tested.

The Criteria

Criteria were developed and applied to each of the eight courses of study evaluated. The criteria were developed in an effort to quantify the evaluation in a way that would lend itself to a relatively objective analysis of the comparative merits of the eight courses of study. Each criterion was selected with specific reference to the objectives and philosophy of the Summer Curriculum Project and required the Evaluator to make a value judgment on a scale ranging from zero to four, of the extent to which the course of study met that criterion. Thirty criteria with a maximum rating of four points made a possible total of 120 points on the total instrument.

The criteria were applied to each of the courses of study:

<ins>The Odyssey</ins>

<ins>Composition: Exposition</ins>

<ins>Walden</ins> and "On the Duty of Civil Disobedience"

<ins>How Green Was My Valley</ins>

Three Tragedies in Nobles Comparative Classics

Call of the Wild

Incredible Journey

The Newspaper

In addition to the criteria, a narrative evaluation suggesting ways in which the courses of study may have been made more effective has been attached to each rating form. The Criteria Rating Form and the narrative statement comprise the evaluation.

AMHERST EVALUATION PROJECT

Criteria for the Evaluation of Eight Courses of Study in English

(120 points possible)

Name of the Course of Study THE ODYSSEY

Total Points Awarded 74

Code

0 - not included or inadequate
1 - minimal
2 - average or adequate
3 - above average
4 - excellent

I. Problem or Overview (8 points)

Well-stated and concise	0 1 2 3 [✓ 4]
Significance recognized	0 1 2 [✓ 3] 4

II. Objectives (36 points)

The major concepts stated are significant and adequate in number	0 1 [✓ 2] 3 4
The specific objectives:	
are stated in behavioral terms	0 1 [✓ 2] 3 4
identify the terminal behavior by name	0 1 [✓ 2] 3 4
describe the conditions under which the behavior will be expected to occur	[✓ 0] 1 2 3 4
specify the criteria of acceptable minimum performance	[✓ 0] 1 2 3 4
are free of "loaded" words	0 1 2 [✓ 3] 4
distinguish the phase level for which the objectives are intended	0 1 2 3 [✓ 4]
clearly communicate the teachers' intent	0 1 2 [✓ 3] 4
are relevant to the major concepts	0 [✓ 1] 2 3 4

III. Content Outline (24 points)

Table of Contents adequate	0 1 2 3 [✓ 4]
Time requirement indicated	0 1 2 3 [✓ 4]
Content is relevant to objectives	0 1 [✓ 2] 3 4
Major headings	0 1 2 [✓ 3] 4
Sub-heads for detail	0 1 [✓ 2] 3 4
Phase level indicated	0 1 2 3 [✓ 4]

IV. Unit Activities (24 points)

Introductory phase well developed and stimulating	0 1 [✓ 2] 3 4
Developmental phase clearly delineates activities for	
entire group	0 1 2 [✓ 3] 4
small group	0 1 [✓ 2] 3 4
individuals	0 1 2 [✓ 3] 4
Offers a variety of teaching methods	0 1 [✓ 2] 3 4
Culminating activities defined	0 1 [✓ 2] 3 4

V. Sources of Information (12 points)

Adequate student references	0 1 2 3 [✓ 4]
Suggests additional teacher references	0 [✓ 1] 2 3 4
Lists audio-visuals and other materials	0 1 2 [✓ 3] 4

VI. Evaluation (16 points)

The test item is appropriate to one or more of the specific objectives	0 1 2 [✓ 3] 4

The test item requires a demonstrated behavior (as opposed to producing a fact from memory)	0 1 [✓ 2] 3 4
Provides for other than paper and pencil items	0 [✓ 1] 2 3 4
The evaluation is adequate for "testing-out"	0 1 2 [✓ 3] 4

Total Points 74

This course of study is, despite some obvious weaknesses, one of the three best. The overview was well-stated, concise and gave the reader reason to believe that The Odyssey could make a contribution to the solutions of the problems of a modern society. The three concepts listed were good but quite general. Lacking specificity, they did not lend themselves to the development of the specific objectives and their relevance to the objectives was difficult to ascertain. For example, the concepts listed "...a synthesis of a modern philosophy of man and his society," and "Modern civilization is based in the culture of the past." A careful examination of the specific objectives and the teaching methods revealed no attempt to relate them to these concepts.

The specific objectives, content outline, and the unit activities were all content oriented. The specific objectives were stated in behavioral terms and were rated as average or "adequate." The objectives were, in fact, somewhat better than average in that they did generally identify the terminal behavior by name. On the negative side, it was difficult to find objectives that describe the conditions under which the behavior was expected to occur or that specified the criteria for acceptable minimum performance. On the plus side again, the objectives were relatively free of Mager's "loaded" words, they effectively identified the phase levels for which they were intended, and they rather effectively communicated the teacher's intent. They did not appear to be relevant to the major concepts stated.

The content outline and unit activities were rather conventional in that they were directed toward the student's acquisition of factual information about The Odyssey. It was difficult for the Evaluator to imagine a student progressing through the unit on a completely individualized basis because most of the teaching methods suggested indicated large or small group activities.

The evaluation and procedures for "test-out" were thorough. Although it was generally difficult to determine whether the test item was measuring a specific behavior or a fact which could be acquired by rote memorization, it was easy to believe that any student who could successfully pass the tests had acquired a great accumulation of information about The Odyssey.

In summary, the course of study was "above average." It was detailed, certainly content-oriented, and thoroughly "tested." It was weakest when one tried to relate the major concepts stated to the specific objectives listed. They did not "mesh." The objectives were stated adequately in behavioral terms but no apparent effort was made to list the behaviors in order of importance or to establish a hierarchy of objectives. This particular criticism is equally true of all eight of the courses of study.

AMHERST EVALUATION PROJECT

Criteria for the Evaluation of Eight Courses of Study in English

(120 points possible)

Name of the Course of Study COMPOSITION: EXPOSITION

Total Points Awarded 81

Code

0 - not included or inadequate
1 - minimal
2 - average or adequate
3 - above average
4 - excellent

I. Problem or Overview (8 points)	
Well-stated and concise	0 1 2 [✓ 3] 4
Significance recognized	0 1 [✓ 2] 3 4
II. Objectives (36 points)	
The major concepts stated are significant and adequate in number	0 [✓ 1] 2 3 4
The specific objectives:	
are stated in behavioral terms	0 1 2 [✓ 3] 4
identify the terminal behavior by name	0 1 2 [✓ 3] 4
describe the conditions under which the behavior will be expected to occur	0 1 [✓ 2] 3 4
specify the criteria of acceptable minimum performance	0 1 [✓ 2] 3 4
are free of "loaded" words	0 1 2 [✓ 3] 4
distinguish the phase level for which the objectives are intended	0 1 2 3 [✓ 4]
clearly communicate the teachers' intent	0 1 2 [✓ 3] 4
are relevant to the major concepts	0 1 2 [✓ 3] 4

III. Content Outline (24 points)

Table of Contents adequate	0 1 2 3 [✓ 4]
Time requirement indicated	0 1 2 3 [✓ 4]
Content is relevant to objectives	0 1 2 3 [✓ 4]
Major headings	0 1 2 [✓ 3] 4
Sub-heads for detail	0 1 2 [✓ 3] 4
Phase level indicated	0 1 2 3 [✓ 4]

IV. Unit Activities (24 points)

Introductory phase well developed and stimulating	0 1 2 [✓ 3] 4
Developmental phase clearly delineates activities for	
entire group	0 1 2 [✓ 3] 4
small group	0 1 2 [✓ 3] 4
individuals	0 1 2 [✓ 3] 4
Offers a variety of teaching methods	0 1 2 [✓ 3] 4
Culminating activities defined	0 1 2 3 [✓ 4]

V. Sources of Information (12 points)

Adequate student references	0 1 2 [✓ 3] 4
Suggests additional teacher references	0 1 2 [✓ 3] 4
Lists audio-visuals and other materials	0 1 [✓ 2] 3 4

VI. Evaluation (16 points)

The test item is appropriate to one or more of the specific objectives	0 1 2 [✓ 3] 4

The test item requires a demonstrated behavior (as opposed to producing a fact from memory)	0 1 [✓ 2] 3 4
Provides for other than paper and pencil items	0 1 2 [✓ 3] 4
The evaluation is adequate for "testing-out"	0 1 2 [✓ 3] 4

Total Points 81

Perhaps the fact that composition and expository exercises lend themselves to observable behaviors or outcomes partially accounts for the high rating given this course of study. It was characterized by the same thoroughness and detail as was The Odyssey, also prepared by M. Charlotte Halpin. Of the eight courses of study evaluated, it seemed to encompass the concept and philosophy of the Amherst Evaluation Project most effectively.

The overview was concise, almost to the extreme. It would appear to be more effective had the writer expanded it to include an overview of how the completion of such a course of study would help the learner to effect the mastery of expository writing. The single concept listed was overly general and did not lend itself to a specific instructional program. The concept was relevant to the instruction prescribed only in a most general way. For example, the writer was obviously concerned that the student be able to select a topic for expository writing which is neither too broad nor too narrow for the purpose intended. It would seem that concepts such as "To develop a concept of depth and breadth of a topic in relation to the purpose of the exposition" would have been appropriate and would have permitted the writer to direct specific objectives at the concept.

The specific objectives were well-constructed in behavioral terms. They generally identified the behavior by name and one could usually infer the conditions under which the behaviors were expected to occur. They were weakest in establishing criteria of acceptable minimum performance. The objectives are suited to individualized instruction and appear to be arranged in logical sequence. With little additional effort, the objectives could be arranged into a hierarchy such as was presented on page 14.

The content included in the course of study was well-chosen. In almost every case it contributed effectively to one or more of the instructional objectives and tended to be an excellent example of the type of writing under examination.

The evaluation techniques were excellent. The relationship between the test item or exercise and a behavioral outcome was generally quite obvious. The plan for testing-out was adequate.

In summary, the evaluator was impressed with the course of study. It has a broad applicability which will make it valuable to teachers who choose to use it and would prove extremely valuable to beginning teachers. Perhaps the greatest strength of the material is the ease with which it can be adapted to a completely individualized program of instruction.

AMHERST EVALUATION PROJECT

Criteria for the Evaluation of Eight Courses of Study in English

(120 points possible)

Code
0 - not included or inadequate
1 - minimal
2 - average or adequate
3 - above average
4 - excellent

Name of the Course of Study WALDEN and "On the Duty of Civil Disobedience"

Total Points Awarded 53

I. Problem or Overview (8 points)

Well-stated and concise	0 1 [✓ 2] 3 4
Significance recognized	0 [✓ 1] 2 3 4

II. Objectives (36 points)

The major concepts stated are significant and adequate in number	0 1 [✓ 2] 3 4

The specific objectives:

are stated in behavioral terms	0 1 [✓ 2] 3 4
identify the terminal behavior by name	0 [✓ 1] 2 3 4
describe the conditions under which the behavior will be expected to occur	[✓ 0] 1 2 3 4
specify the criteria of acceptable minimum performance	[✓ 0] 1 2 3 4
are free of "loaded" words	0 1 [✓ 2] 3 4
distinguish the phase level for which the objectives are intended	0 1 2 3 [✓ 4]
clearly communicate the teachers' intent	0 1 [✓ 2] 3 4
are relevant to the major concepts	0 1 [✓ 2] 3 4

III. Content Outline (24 points)

Table of Contents adequate	0 1 2 [✓ 3] 4
Time requirement indicated	0 1 [✓ 2] 3 4
Content is relevant to objectives	0 1 [✓ 2] 3 4
Major headings	0 1 [✓ 2] 3 4
Sub-heads for detail	[✓ 0] 1 2 3 4
Phase level indicated	0 1 2 3 [✓ 4]

IV. Unit Activities (24 points)

Introductory phase well developed and stimulating	0 [✓ 1] 2 3 4
Developmental phase clearly delineates activities for	
entire group	0 1 2 [✓ 3] 4
small group	0 1 2 [✓ 3] 4
individuals	0 [✓ 1] 2 3 4
Offers a variety of teaching methods	0 [✓ 1] 2 3 4
Culminating activities defined	0 [✓ 1] 2 3 4

V. Sources of Information (12 points)

Adequate student references	0 1 2 [✓ 3] 4
Suggests additional teacher references	0 1 [✓ 2] 3 4
Lists audio-visuals and other materials	[✓ 0] 1 2 3 4

VI. Evaluation (16 points)

The test item is appropriate to one or more of the specific objectives	0 [✓ 1] 2 3 4

The test item requires a demonstrated behavior (as opposed to producing a fact from memory) 0 1 2 [✓ 3] 4

Provides for other than paper and pencil items [✓ 0] 1 2 3 4

The evaluation is adequate for "testing-out" 0 [✓ 1] 2 3 4

Total Points 53

Walden and "On the Duty of Civil Disobedience, by Henry David Thoreau, are selections with a timeless message. There are those who would point to the essay "On the Duty of Civil Disobedience" as having particular relevance and meaning to the problems of our contemporary society. The concepts listed in the course of study, however, did not include an attempt to develop insights into the relationship between the problems seen by Thoreau and the problems seen by the students. The concepts centered on the more mechanical aspects of these works such as "sensitivity to the imaginative expression of rhythm of language...the effectiveness of a literary work of art depends on form, content, purpose, and originality of expression...and, literature functions at different levels of meaning."

The specific instructional objectives for the study of "On the Duty of Civil Disobedience" were limited to four. These objectives asserted that the student should "demonstrate the ability" to identify political situations..., relate analogies..., and examine topics and write an essay. Each of the underlined words implies a behavioral outcome but does not suggest the condition under which it is expected to occur or the acceptable minimum performance. Words such as relate, identify, and examine need further quantification if they are to be truly effective in identifying specific behavioral outcomes.

The objectives listed for the study of Walden were limited to five. These included "cite passages, determine meanings of vocabulary... understand meanings of literary devices, and...write an essay." The fourth objective, "Point out how the 'little world of Walden' serves to demonstrate universal human experience" provided an excellent opportunity to develop a concept of man in microcosm.

The teaching methods proposed were traditional and, with the exception of an essay, largely group-oriented rather than individual-oriented. In summary, the teaching methods suggested that students read the text, discuss pertinent material, write an essay, present group presentations of topics, and read allied material. Essentially, the teaching method was limited to discussion and essay.

The sources listed for class discussion and the topics suggested for essays were excellent and showed careful thought. Other than these, however, there was no content organization built into the course of study.

The sample test included was limited to the identification of eleven literary devices such as personification and analogy. There was little to indicate that a student could move through this unit with a minimum of teacher direction or that the evaluation was thorough enough to permit a student to test-out of the course.

AMHERST EVALUATION PROJECT

Criteria for the Evaluation of Eight Courses of Study in English

(120 points possible)

Code
0 - not included or inadequate
1 - minimal
2 - average or adequate
3 - above average
4 - excellent

Name of the Course of Study HOW GREEN WAS MY VALLEY

Total Points Awarded 58

I. Problem or Overview (8 points)

Well-stated and concise	0 1 [✓ 2] 3 4
Significance recognized	0 1 [✓ 2] 3 4

II. Objectives (36 points)

The major concepts stated are significant and adequate in number	0 1 [✓ 2] 3 4
The specific objectives:	
are stated in behavioral terms	0 1 2 [✓ 3] 4
identify the terminal behavior by name	0 1 [✓ 2] 3 4
describe the conditions under which the behavior will be expected to occur	0 1 [✓ 2] 3 4
specify the criteria of acceptable minimum performance	0 [✓ 1] 2 3 4
are free of "loaded" words	0 1 2 [✓ 3] 4
distinguish the phase level for which the objectives are intended	0 1 2 3 [✓ 4]
clearly communicate the teachers' intent	0 1 [✓ 2] 3 4
are relevant to the major concepts	0 1 [✓ 2] 3 4

III. Content Outline (24 points)

Table of Contents adequate	0 1 2 [✓ 3] 4
Time requirement indicated	[✓ 0] 1 2 3 4
Content is relevant to objectives	0 1 2 [✓ 3] 4
Major headings	0 1 2 [✓ 3] 4
Sub-heads for detail	0 1 [✓ 2] 3 4
Phase level indicated	0 1 2 3 [✓ 4]

IV. Unit Activities (24 points)

Introductory phase well developed and stimulating	0 1 [✓ 2] 3 4
Developmental phase clearly delineates activities for	
entire group	0 1 [✓ 2] 3 4
small group	0 [✓ 1] 2 3 4
individuals	0 [✓ 1] 2 3 4
Offers a variety of teaching methods	0 [✓ 1] 2 3 4
Culminating activities defined	0 [✓ 1] 2 3 4

V. Sources of Information (12 points)

Adequate student references	0 1 [✓ 2] 3 4
Suggests additional teacher references	0 [✓ 1] 2 3 4
Lists audio-visuals and other materials	0 [✓ 1] 2 3 4

VI. Evaluation (16 points)

The test item is appropriate to one or more of the specific objectives	0 1 [✓ 2] 3 4

The test item requires a demonstrated behavior (as opposed to producing a fact from memory)	0 [✓ 1] 2 3 4
Provides for other than paper and pencil items	0 [✓ 1] 2 3 4
The evaluation is adequate for "testing-out"	0 1 [✓ 2] 3 4

Total Points 58

The overview and the concepts are identical in each of the three courses of study for How Green Was My Valley, Walden and "On the Duty of Civil Disobedience," and Three Tragedies in Noble's Comparative Classics. In each case they are rather highly generalized and, in the case of the concepts, are difficult to relate to the objectives, content, and teaching plan.

In contrast to the course of study on Walden, in which the specific objectives were neither extensive nor well-developed in terms of behavioral outcomes, the instructional objectives for How Green Was My Valley were, in the opinion of the Evaluator, much nearer the intent of the Summer Curriculum Project. Not only were the objectives more specific and quantitative, they were more adaptable to individualization.

The teaching methods as in Walden, tended to involve primarily group activities. Five of the seven suggested teaching methods involved the discussion of some aspect of the novel. The other two were not truly teaching methods.

The sample quiz was certainly better developed in that it related to the specific objectives and certainly indicated that a student passing the quiz had considerable information about the content of the novel. Both the evaluation and the objectives concentrated on the content of the novel in contrast to what appeared to be an emphasis on mechanics in Walden.

In summary, the unit would appear to be in need of considerable expansion, both in objectives and activities for individuals, before it could be effectively used for individualized instruction by any other than the writer of the course of study.

AMHERST EVALUATION PROJECT

Criteria for the Evaluation of Eight Courses of Study in English

(120 points possible)

Code
0 - not included or inadequate
1 - minimal
2 - average or adequate
3 - above average
4 - excellent

Name of the Course of Study Three Tragedies in NOBLE'S COMPARATIVE CLASSICS

Total Points Awarded 44

I. Problem or Overview (8 points)

Well-stated and concise	0 1 [✓ 2] 3 4
Significance recognized	0 [✓ 1] 2 3 4

II. Objectives (36 points)

The major concepts stated are significant and adequate in number	0 [✓ 1] 2 3 4
The specific objectives:	
are stated in behavioral terms	0 [✓ 1] 2 3 4
identify the terminal behavior by name	0 [✓ 1] 2 3 4
describe the conditions under which the behavior will be expected to occur	[✓ 0] 1 2 3 4
specify the criteria of acceptable minimum performance	0 [✓ 1] 2 3 4
are free of "loaded" words	0 [✓ 1] 2 3 4
distinguish the phase level for which the objectives are intended	0 1 2 3 [✓ 4]
clearly communicate the teachers' intent	0 1 [✓ 2] 3 4
are relevant to the major concepts	0 [✓ 1] 2 3 4

III. Content Outline (24 points)	
Table of Contents adequate	0 1 [✓ 2] 3 4
Time requirement indicated	[✓ 0] 1 2 3 4
Content is relevant to objectives	0 1 [✓ 2] 3 4
Major headings	0 1 2 [✓ 3] 4
Sub-heads for detail	0 [✓ 1] 2 3 4
Phase level indicated	0 1 2 3 [✓ 4]
IV. Unit Activities (24 points)	
Introductory phase well developed and stimulating	0 [✓ 1] 2 3 4
Developmental phase clearly delineates activities for	
entire group	0 1 [✓ 2] 3 4
small group	0 1 [✓ 2] 3 4
individuals	0 [✓ 1] 2 3 4
Offers a variety of teaching methods	0 [✓ 1] 2 3 4
Culminating activities defined	0 [✓ 1] 2 3 4
V. Sources of Information (12 points)	
Adequate student references	0 1 [✓ 2] 3 4
Suggests additional teacher references	0 [✓ 1] 2 3 4
Lists audio-visuals and other materials	0 1 [✓ 2] 3 4
VI. Evaluation (16 points)	
The test item is appropriate to one or more of the specific objectives	0 [✓ 1] 2 3 4

The test item requires a demonstrated behavior (as opposed to producing a fact from memory)	0 [✓ 1] 2 3 4
Provides for other than paper and pencil items	0 [✓ 1] 2 3 4
The evaluation is adequate for "testing-out"	0 [✓ 1] 2 3 4

Total Points 44

The organization of this course of study was interesting in that the writer used a rather unusual approach to adapt comparative studies to ability groups. The course of study deals with three selections and three ability groups. Shakespeare's Hamlet was required reading of all three groups and was, of course, the baseline for discussion. Phase three was required to read O'Neill's Beyond the Horizon and compare it with Hamlet. Phase four and five were required to read Sophocle's Electra and compare it with Hamlet. Assuming that Beyond the Horizon is truly more suitable to lower ability groups than is Electra, the plan captures the imagination. The course of study does not capture the imagination.

The special objectives for the Three Tragedies could not be called "non-behavioral" but they certainly approached that definition. Objectives which state "Read Beyond the Horizon," "Answer all questions in the study guide," "Interpret character motivation," and "Read carefully the explanatory notes on pages 428-433 of the text" may indicate an overt behavior on the part of the learner but they do not, in the opinion of the Evaluator, represent the thinking of either Robert Mager or the Amherst Curriculum Project.

The course of study, having briefly mentioned Beyond the Horizon and Electra, devoted itself to the development of Hamlet. The teaching methods suggested were for Hamlet and proposed that the group read Hamlet verbatim, this reading to be followed by "detailed discussion." The discussion materials suggested were for Hamlet exclusively and dealt exclusively with factual content by acts.

The evaluation relied heavily on traditional test items which required recall or memory as opposed to a demonstrated skill or ability such as establishing relationships or making broad generalizations about relative merits of the selections studied. Despite the fact that the obvious intent of the course of study was to provide for comparative study of the three selections and at least three of the specific objectives referred to comparisons, not a single test item was devoted to relating the three tragedies.

In summary, the course of study did not successfully arrange the objectives in such a way that one could establish the relative importance of each objective. The desired behaviors were not clearly established, procedures for individual progress through the unit were not apparent, and the procedures for testing-out were not defined. The discussion questions for Hamlet were good and would prove quite valuable as a study guide for individualized instruction if suitable procedures were provided.

AMHERST EVALUATION PROJECT

Criteria for the Evaluation of Eight Courses of Study in English

(120 points possible)

Code
0 - not included or inadequate
1 - minimal
2 - average or adequate
3 - above average
4 - excellent

Name of the Course of Study CALL OF THE WILD

Total Points Awarded 55

I. Problem or Overview (8 points)

Well-stated and concise	0 1 2 [✓ 3] 4
Significance recognized	0 1 2 [✓ 3] 4

II. Objectives (36 points)

The major concepts stated are significant and adequate in number	0 1 2 3 [✓ 4]
The specific objectives:	
are stated in behavioral terms	0 1 2 [✓ 3] 4
identify the terminal behavior by name	0 1 [✓ 2] 3 4
describe the conditions under which the behavior will be expected to occur	0 [✓ 1] 2 3 4
specify the criteria of acceptable minimum performance	0 [✓ 1] 2 3 4
are free of "loaded" words	0 [✓ 1] 2 3 4
distinguish the phase level for which the objectives are intended	0 1 2 [✓ 3] 4
clearly communicate the teachers' intent	0 1 [✓ 2] 3 4
are relevant to the major concepts	0 [✓ 1] 2 3 4

III. Content Outline (24 points)

Table of Contents adequate	0 1 2 [✓ 3] 4
Time requirement indicated	0 1 2 [✓ 3] 4
Content is relevant to objectives	0 1 [✓ 2] 3 4
Major headings	0 1 [✓ 2] 3 4
Sub-heads for detail	0 1 [✓ 2] 3 4
Phase level indicated	0 1 2 [✓ 3] 4

IV. Unit Activities (24 points)

Introductory phase well developed and stimulating	0 [✓ 1] 2 3 4
Developmental phase clearly delineates activities for	
entire group	0 [✓ 1] 2 3 4
small group	0 [✓ 1] 2 3 4
individuals	0 [✓ 1] 2 3 4
Offers a variety of teaching methods	0 [✓ 1] 2 3 4
Culminating activities defined	0 [✓ 1] 2 3 4

V. Sources of Information (12 points)

Adequate student references	0 1 [✓ 2] 3 4
Suggests additional teacher references	0 1 [✓ 2] 3 4
Lists audio-visuals and other materials	0 [✓ 1] 2 3 4

VI. Evaluation (16 points)

The test item is appropriate to one or more of the specific objectives	0 [✓ 1] 2 3 4

The test item requires a demonstrated behavior (as opposed to producing a fact from memory)	0 [✓ 1] 2 3 4
Provides for other than paper and pencil items	0 [✓ 1] 2 3 4
The evaluation is adequate for "testing-out"	0 1 [✓ 2] 3 4

Total Points 55

The choice of this selection for the introduction of slow learners to the novel was excellent. The concepts were excellent in that they are universal and are beautifully pointed out in the selection. It is unfortunate that a culminating activity was not included in the course of study which related the content studied back to the concepts and which gave the students a chance to develop these insights and understandings.

Although it is not the purpose of the Evaluator to question the intent of the writer, he cannot help but wonder why it is necessary to teach slow learners the major elements of a novel. Elements such as plot, setting characterization, theme, and concepts of imagery and symbolism are unquestionably important in a serious study of literature, but perhaps an arduous and even unpleasant task for slow-learning ninth graders.

The specific objectives were stated behaviorally. The words "define, describe, contrast, and identify" certainly indicate a behavior on the part of the student. If the objectives can be criticized, it would be on their inadequacy to quantify conditions under which the behavior will occur and in establishing criteria for minimum acceptable performance.

The study guide was good and the theme suggestions were definitely insightful. The evaluation was woefully traditional in that it relied almost entirely on memory. Multiple-choice and completion type items were used and it would be difficult to justify as a means of measuring behavioral outcomes.

In general, the course of study has merit. The provision for individualized progression through the unit is difficult to imagine, and it must be imagined since there were no specific provisions for individualized treatment of students.

AMHERST EVALUATION PROJECT

Criteria for the Evaluation of Eight Courses of Study in English

(120 points possible)

Code
0 - not included or inadequate
1 - minimal
2 - average or adequate
3 - above average
4 - excellent

Name of the Course of Study THE INCREDIBLE JOURNEY

Total Points Awarded 42

I. Problem or Overview (8 points)

Well-stated and concise	0 [✓ 1] 2 3 4
Significance recognized	0 [✓ 1] 2 3 4

II. Objectives (36 points)

The major concepts stated are significant and adequate in number	0 [✓ 1] 2 3 4
The specific objectives:	
are stated in behavioral terms	0 1 [✓ 2] 3 4
identify the terminal behavior by name	0 1 [✓ 2] 3 4
describe the conditions under which the behavior will be expected to occur	[✓ 0] 1 2 3 4
specify the criteria of acceptable minimum performance	[✓ 0] 1 2 3 4
are free of "loaded" words	0 1 2 [✓ 3] 4
distinguish the phase level for which the objectives are intended	0 1 [✓ 2] 3 4
clearly communicate the teachers' intent	0 1 [✓ 2] 3 4
are relevant to the major concepts	0 [✓ 1] 2 3 4

III. Content Outline (24 points)

Table of Contents adequate	0 1 [✓ 2] 3 4
Time requirement indicated	0 1 2 3 [✓ 4]
Content is relevant to objectives	0 [✓ 1] 2 3 4
Major headings	0 1 [✓ 2] 3 4
Sub-heads for detail	0 [✓ 1] 2 3 4
Phase level indicated	0 1 2 [✓ 3] 4

IV. Unit Activities (24 points)

Introductory phase well developed and stimulating	0 [✓ 1] 2 3 4
Developmental phase clearly delineates activities for	
entire group	0 1 [✓ 2] 3 4
small group	0 [✓ 1] 2 3 4
individuals	0 [✓ 1] 2 3 4
Offers a variety of teaching methods	0 [✓ 1] 2 3 4
Culminating activities defined	0 [✓ 1] 2 3 4

V. Sources of Information (12 points)

Adequate student references	0 1 [✓ 2] 3 4
Suggests additional teacher references	0 [✓ 1] 2 3 4
Lists audio-visuals and other materials	[✓ 0] 1 2 3 4

VI. Evaluation (16 points)

The test item is appropriate to one or more of the specific objectives	0 [✓ 1] 2 3 4

The test item requires a demonstrated behavior (as opposed to producing a fact from memory)	0 [✓ 1] 2 3 4
Provides for other than paper and pencil items	0 [✓ 1] 2 3 4
The evaluation is adequate for "testing-out"	0 [✓ 1] 2 3 4

Total Points 42

The overview of the course of study consisted of little more than a statement that the Incredible Journey easily lends itself to a comparison with Call of the Wild and that it is easily read. The concepts which the students are expected to form, stated in the most concise terms, are that animals have human-like qualities, reward kind masters with devotion, have a strong instinct for finding their way home, and do not "whine about their conditions." As concepts, even for slow-learning ninth graders, these are simple if not trite. The specific objectives related to the concepts only incidentally but devoted themselves instead to the major elements of setting examples of figures of speech and symbolism, and specific incidents portrayed in the novel.

Two teaching methods were suggested, if they could be called methods: the teacher should help the class draw a comparison between Call of the Wild and The Incredible Journey, and that students may wish to read other animal stories. The major portion of the course of study was devoted to a study guide by chapter in which specific content questions were asked.

The evaluation for the course of study was extensive and certainly should be considered adequate to determine factual content. Most of the questions were matching, completion, or identification. In the Evaluator's opinion, the questions tested memory rather than behavior.

In summary, there was little evidence that a ninth grader could move through this course of study at his own pace. By the same token, there was little evidence that he could not. Outside of four concepts, twelve specific objectives, eleven pages of study questions, and twelve pages of test items, how the course of study might be adapted to individualized instructional programs was left entirely to the imagination of the reader.

AMHERST EVALUATION PROJECT

Criteria for the Evaluation of Eight Courses of Study in English

(120 points possible)

Code
0 - not included or inadequate
1 - minimal
2 - average or adequate
3 - above average
4 - excellent

Name of the Course of Study THE NEWSPAPER

Total Points Awarded 79

I. Problem or Overview (8 points)

Well-stated and concise	0 1 [✓ 2] 3 4
Significance recognized	0 1 [✓ 2] 3 4

II. Objectives (36 points)

The major concepts stated are significant and adequate in number	0 1 2 3 [✓ 4]
The specific objectives:	
are stated in behavioral terms	0 1 2 [✓ 3] 4
identify the terminal behavior by name	0 1 2 [✓ 3] 4
describe the conditions under which the behavior will be expected to occur	0 1 [✓ 2] 3 4
specify the criteria of acceptable minimum performance	0 1 [✓ 2] 3 4
are free of "loaded" words	0 1 2 [✓ 3] 4
distinguish the phase level for which the objectives are intended	0 1 2 3 [✓ 4]
clearly communicate the teachers' intent	0 1 2 3 [✓ 4]
are relevant to the major concepts	0 1 2 3 [✓ 4]

III. Content Outline (24 points)

Table of Contents adequate	0 1 2 [✓ 3] 4
Time requirement indicated	0 1 [✓ 2] 3 4
Content is relevant to objectives	0 1 [✓ 2] 3 4
Major headings	0 1 [✓ 2] 3 4
Sub-heads for detail	0 [✓ 1] 2 3 4
Phase level indicated	0 1 [✓ 2] 3 4

IV. Unit Activities (24 points)

Introductory phase well developed and stimulating	0 1 [✓ 2] 3 4
Developmental phase clearly delineates activities for	
entire group	0 1 2 [✓ 3] 4
small group	0 1 2 [✓ 3] 4
individuals	0 1 2 [✓ 3] 4
Offers a variety of teaching methods	0 1 2 [✓ 3] 4
Culminating activities defined	0 1 2 [✓ 3] 4

V. Sources of Information (12 points)

Adequate student references	0 1 [✓ 2] 3 4
Suggests additional teacher references	0 [✓ 1] 2 3 4
Lists audio-visuals and other materials	0 1 [✓ 2] 3 4

VI. Evaluation (16 points)

The test item is appropriate to one or more of the specific objectives	0 1 2 [✓ 3] 4

The test item requires a demonstrated behavior (as opposed to producing a fact from memory)	0 1 2 [✓ 3] 4
Provides for other than paper and pencil items	0 1 2 [✓ 3] 4
The evaluation is adequate for "testing-out"	0 1 2 [✓ 3] 4

Total Points 79

This course of study was quite effective both in the development of the specific objectives and the section on evaluation. The specific objectives were carefully thought out, organized into logical categories, and meaningful. The section on evaluation tested the objectives effectively in that the evaluation required the student to demonstrate the behaviors stated in the objectives.

The teaching methods were varied and relied heavily on student involvement in publishing a newspaper. Opportunities are available to students to demonstrate their competencies gained through the instructional program. It is easy to imagine students moving through the stated competencies at an individual rate.

Summarily, the course of study is good. It can be used by teachers other than the writer. It would be of considerable value to new or beginning teachers. As with most of the courses of study it was brief and in need of more specificity. Despite this, the Evaluator considers this unit effectively done and certainly one of the best of the eight.

Conclusions

Nine objectives were listed in Summer Curriculum Project, "A Guidebook for Participating Teachers." They were:

1. To provide an instructional program that minimizes the requirement for a direct relationship between the chronological age of the student and his placement in a curriculum,
2. to provide an instructional program that establishes the greatest possible relationship between a student's placement and his needs and abilities as an individual,
3. to allow the individual student to pursue his studies at a rate commensurate with his ability,
4. to provide a curriculum that allows recognition of the values in experiences other than those gained in a formal classroom situation,
5. to provide students with the opportunity to pursue independent study programs separate from the study programs provided in formal classes,
6. to grant each student a major share of the responsibility for directing his own educational program,
7. to encourage each student to develop an inward desire to learn (as opposed to a desire based only on such outside pressures as adult approval, tests, grades, credits, and getting promoted to the next grade or school),

8. to provide each student who is willing to work with an opportunity to succeed (or at least to avoid "failure") in reaching those levels of achievement commensurate with his individual abilities and interests,
9. to provide students, parents, prospective employers, college admissions officers and others with a meaningful and realistic appraisal of the achievements of each of the students who participate in our instructional program.

The courses of study have been ranked in the order of the degree to which they met the objectives in the opinion of the Evaluator. The rankings are subject to many criticisms and questions. It should be recognized that other evaluators might rearrange the rankings.

1. The Newspaper - above average
2. Composition: Exposition - above average
3. The Odyssey - adequate
4. How Green Was My Valley - minimal
5. Call of the Wild - minimal
6. Walden - minimal
7. Three Tragedies - minimal
8. Incredible Journey - minimal

All of the courses of study ranked minimal suffered from the same malady--lack of detail. There simply was not enough detail in the objectives, content, teaching methods, or evaluation to believe that an individualized instructional program could be based on these curricular materials. The teachers obviously were concentrating on behavioral objectives but were not able to carry them through the content and the evaluation techniques. Most of the teaching methods were group methods, not individualized methods. After having stated a behavioral objective, the teacher then devoted every effort to the traditional content in very traditional ways. In short, there was little evidence that the principles in Mager's booklet were observed in these courses of study.

CHAPTER VII - MULTIPLE REGRESSION ANALYSIS

INTRODUCTION

The phase system offers something different from the traditional reward system; it presents the possibility of high marks to any student who is willing to work to his full capacity, regardless of what that capacity might be in absolute terms. In practice, students (with the help of counselors and/or teachers) are allowed to select their own phase for each subject; however, past achievement is considered more important, in most cases, than ability. Phase is therefore not strictly an ability grouping, and is not imposed on the student. Phase should allow a student to be in a class where the work is challenging but not impossible.

In the traditional school, where 1) marks are based on absolute criteria of achievement, and 2) that achievement is closely related to ability, marks will be most closely related to ability and/or standardized achievement. For example, composite scores on the Iowa Tests of Educational Development correlated .58 with marks given to students in Social Studies and Math, and .45 with marks in English, and .56 with those in Science, (Science Research Associates, 1963).

In regard to the phase system, such questions come to mind as: Does phasing really result in a different distribution of marks? Is there less correlation with traditional hallmarks such as standard achievement scores? Does a student's effort vitally affect his mark, or do other factors still enter in strongly?

To answer these questions, information was gathered -- achievement and attitudinal scores, plus school data -- to see what factors actually do relate to teachers' assignment of marks. A statistical analysis was performed. A brief introduction to the technique used, with application to an example, will help the reader interpret those data most pertinent to his own interests. A general summary of all the data is made at the end of this section.

ANALYSIS

Method

Variables Variables are numerical representations of interesting attributes of objects or persons. They are measurements or categories of some kind, e. g., achievement scores or gender. The particular variable under scrutiny, to which the other variables may somehow be related, is called, in statistical terms, the "dependent" variable. The other variables are called "independent". It should be noted that correlational relationships between variables, whatever their labels, do not necessarily signify causality, unless they meet some other criteria (see Blalock, 1961). As will be seen later, however, some implications will be drawn from the correlational relationships in this study.

Simple Correlation A relationship between one variable and one other variable is commonly measured in terms of a simple correlation (r), (e. g., the correlation between grades in school and intelligence may be .60). Another way of thinking about simple correlation is that it is a standard measure of relatedness between two variables, (compensating for their differing means and standard deviations); it is a standardized covariance. It is the extent to which two variables are measuring either the same thing, or different manifestations of a common underlying variable. (For example, a reading comprehension test and a general vocabulary test might correlate .80, and the common underlying variable might be called verbal ability.) Another phrase that may also be used here is "amount of overlap" between two variables. The square of the correlation (r^2) may be thought of as percent of overlap.

Multiple Correlation The relationship between one variable, and several other variables in combination, is a multiple correlation (R), (e.g., the relationship between grades and a combination of intelligence and effort might be .70). Multiple correlation, simply stated, is a statistical technique which interrogates data to find important relationships among more than two variables. In particular, it finds the combination of independent variables which is most closely related to (best explains; or best accounts for) the dependent variable.

The more that two (independent) variables measure the same thing (the more "overlap"), the less one of them adds to the "explanation" of a dependent variable, over and above what the other one contributes. Independent variables whose contributions are more dissimilar will add more to the total correlation than those which duplicate more the functions of other variables. E. g., two measures of quantitative ability which correlate .90 will not explain much more of algebra achievement than will either one of them alone.

Weight Independent variables are "weighted" unequally (given more or less importance, mathematically), depending on their relative relationships to the dependent variable. (The combination of independent variables, their weights, and the dependent variable is a multiple regression equation.[1]) If two measures correlate equally well with achievement and both measures are used in the relationship, they are likely to receive equal weights. The two variables will not explain much more of the achievement than one, but what is explained will be divided between the two.

A "weight" is the number by which one unit of change in the independent variable must be multiplied to get the corresponding change in the dependent variable, in terms of its unit of measurement. For example, when "explaining" physical weight as a function of height, the statistical weight that height gets is much smaller if height is in inches, than if it is in feet. The correlation (standardized covariance) between weight and height-in-inches, and weight and height-in-feet is identical.

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[1] Hays (1963, Chapter 15) distinguishes between multiple regression and multiple correlation, even though the "mechanics" are the same. For Hays, multiple regression has an experimentally manipulated independent variable(s) which has particular values selected in advance. Such is not the case in this study. Relationships among variables are being considered as they exist in the natural, on-going school setting. For purposes of this paper, the terms multiple regression and multiple correlation will refer to the same statistical technique.

It can be seen from this that the weight which each independent variable receives (called a "beta" weight) is a function not only of its relationship to the other variables, but also a function of the relative size of the units of measure for the independent and dependent variables (i. e., the relative size of the standard deviations).

Standardized Weights   The method for getting around this complication of interpretation is systematically to change all variables to the same standard deviation, commonly a standard deviation of 1 with a mean of 0. This does not change any of the relative measurements which make up variable scores, nor does it change the relationship among the variables. It allows the weight given an independent variable to be a function only of its relatedness to the dependent variable and its "overlap" with other independent variables in the equation.

Weights derived in the foregoing manner are "standardized" weights (called beta primes). Standardized weights have the same magnitude as correlations; they vary from 1 (perfect relationship), through 0 (no relationship, or completely random relationship), to -1 (perfect inverse relationship). (In a case having only one independent variable, its standardized weight _is_ the correlation of the two variables.)

Comparing Weights   Judgements of _relative_ importance of variables, or relative power in explaining a dependent variable, may be made by comparing the standardized weights on variables within any single equation.

Comparisons cannot be made between equations because of differences in the relative size of raw standard deviations. Weights for a particular equation can be rank ordered to show the relative importance of their relationships to that one dependent variable. It may be of interest to compare the rank order of variables for one dependent variable to their rank order for another dependent variable.

R^2 R^2 (the square of the multiple correlation) may be interpreted as the percent of variation in the dependent variable that is accounted for by the independent variables. The higher the R^2 is for a dependent variable, the more of that variable has been "explained" by the particular combination of independent variables.

The R^2 for any analysis is partly a function of the number of variables in the equation, and the size of the group in question. For the same variables, a smaller group will receive a higher R^2 than a larger one. More variables for any given group will produce a higher R^2. The number of students in the subject/class combinations in this study ranges from 67 to 227. Therefore, this factor enters in quite strongly for certain equations.

Stepwise Regression In a study involving many variables, there can result such an overabundance of data, that interpretation of weights becomes unnecessarily ponderous and the explanation rather unparsimonious. There is a refinement of the multiple regression technique by which variables are added to the equation one at a time, in successive steps; moreover, they are added in the order of their relative importance to the dependent variable. The first step includes only one independent variable -- the one most highly correlated with the dependent variable. The second step adds the variable which, independent of the first variable, is next most highly correlated with the dependent variable. There are three variables in the third step, four in the fourth, and so on. Variables are added until the point is reached at which a new variable does not increase the multiple correlation (R) by a statistically significant amount.[2] This is the "last significant step". The unused variables add very little to the equation. This technique, called stepwise regression, reduces the number of variables which must be interpreted, by selecting the most important ones.

The last significant step is typically chosen for interpretation, but it

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[2] Table 1 presents sample values of the F ratio, at two significance levels (.05 and .01), for 1) selected numbers of variables already entered in the equation (8 and 5), and 2) selected numbers of students in the equation minus the number of variables in the equation. An F of 2.5 was selected as the stopping point for each stepwise regression. The stopping point was based on the last significant F, even though there were nonsignificant steps preceding it.

TABLE 1: Values for the F ratio for selected N, number of predictors, and significance levels.

Significance Level		.05		.01	
Number of Predictors		5	8	5	8
Total N minus Number of Predictors	60	2.37	2.10	3.34	2.82
	120	2.29	2.02	3.17	2.66

is frequently of interest to follow the development of the equation from the beginning, as variables are added. A complete equation is constructed at each step. As a stepwise regression progresses, a perusal of the weights will reveal alterations, sometimes drastic, in the weight assigned any one variable, from one equation to the next. It will be recalled that when two variables contribute overlapping information (are correlated with each other) the weight is split between them. Variable C may have a large weight when added initially, but if it is highly correlated with variable D, C will lose a substantial part of its weight to D, when D is added.

Design

The dependent variables of interest are marks given by teachers in the various courses. As has been discussed, junior and senior high schools include a span of six years. Data and sufficient numbers of students were available for five subject areas; namely, Social Studies, English, Mathematics, Science, and Languages. The analysis was, then, a series of analyses by subject-year combinations. For example, the Class of 1972 (7th grade) was analyzed by English marks, then by mathematics marks, science marks, etc. There are five subject analyses for each of six grades with the exception of 8th grade English, for which data werenot available; a total of twenty-nine stepwise regressions are presented in Tables 17 through 74. The number of students making up each analysis is presented in Table 2, as well as in each individual regression table.

TABLE 2: Table of N; Subject and Grade

SUBJECT: GRADE:	English	Math	Science	Soc. Stud.	Language
1972	211	200	210	210	164
1971		226	227	227	160
1970	190	174	140	156	138
1969	197	183	119	158	157
1968	172	147	122	152	106
1967	170	98	99	146	62

Description of Variables

Variables are numbered from 1 to 43 and are listed in Table 3. Some variables were the same for all students; e. g., all students had scores on the *California Study Methods Survey*. Other variables are dependent on the grade being analyzed; e. g., the classes of 1972 and 1971 (junior high school) had *Metropolitan Achievement Test* scores, while the high school students had *Iowa Tests of Educational Development* scores. A short description of the lesser known variables follows.

Attitude Scores Variables 1 through 5 are subscores from the *California Study Methods Survey* (Carter, 1958); this instrument was seen as one way of getting at student attitudes and indirectly, effort. The survey has 150 items with three subtest scores and a verification (consistency or lie) score. The "Attitudes toward School" subtest (variable 1) measures

TABLE 3: Amherst Project Multiple Regression Variables

1	Attitudes toward School
2	Mechanics of Study
3	Planning and System
4	Total (Permanent Zero)
5	Verification Score

Grades 7 - 8 Metropolitan Achievement Test		Grades 9 - 12 Iowa Test Educational Development	
6	Word Knowledge	6	Social Studies Background
7	Reading	7	Nat. Science Background
8	Spelling	8	Correct of Expression
9	Language	9	Quantitative Thinking
10	Language Study Skills	10	Reading Social Studies
11	Arith. Computation	11	Reading Nat. Science
12	Arith. Problem Solving and Concepts	12	Reading Literature
13	Social Studies Information	13	General Vocabulary
14	Social Studies Study Skills	14	Use of Sources
15	Science	15	Blank

16	Total Absences	
17	Total Tardy	
18	Total Suspended	
19	Total Dismissed	
20	Total Work Habits	Teach. Judgement
21	Total Conduct	
22 - 41	Teacher (0 = not in class; 1 = in class)	
42	Phase	
43	Mark (0 = F; 4 = A)	

self-confidence, adjustment to school and scholastic motivation. "Mechanics of Study" (variable 2) measures effectiveness of students' study techniques; e.g., use of outlining, note-taking, memorization, etc. "Planning and System" (variable 3) includes budgeting of time and care in performing academic tasks. The "Verification Score" (variable 5) measures a student's desire to fake a favorable score, and/or chance, indiscriminate marking of responses. Variable 4, which was a total score on the Survey, was eliminated because of its high correlation (overlap) with the subtest scores. Each student was given a zero in that spot to keep the numbering system on the variables consistent with early computer planning.

Achievement Scores Variables 6 - 15 for the junior high classes of 1972 and 1971 are scores for the ten subtests of the Metropolitan Achievement Test (Harcourt, Brace & World, 1960). Table 3 includes these subtests, the names of which give an idea of the kinds of achievement represented by the various scores. Short descriptions of these subtests may be found in Table 4 and more complete descriptions are supplied in the test manual.

Variables 6 - 14 for high school students are scores for the nine subtests of the Iowa Tests of Educational Development (Science Research Associates, 1960). Subtest titles again give a representation of the score meanings and short descriptions may be found in Table 5. Variable 15 for high school students was blank because the Iowa has 9 subtests and the

TABLE 4: Short Descriptions of the Ten Subtests of the *Metropolitan Achievement Test* (Harcourt, Brace and World, 1960).

1.	Word Knowledge:	Choice of word whose literal meaning makes it best selection for completion of sentence. Vocabulary test.
2.	Reading:	Skills of reading comprehension. Questions on each passage progress from easy to difficult. Power test. Includes: main idea; literal meaning or explicit information; relationships among ideas; contextual meaning of unfamiliar words.
3.	Spelling:	Recognition of correct or incorrect spelling of 55 words as presented in context. Corrections to be provided by student.
4.	Language:	Measures knowledge of correct usage, punctuation and capitalization, kinds of sentences, parts of speech and grammar.
5.	Language Study Skills:	In two parts -- use of dictionary and practical familiarity with standard references; on the latter part, student indicates best source of information.
6.	Arithmetic Computation:	45 items covering whole numbers, fractions, graph reading, square root, percent, etc.
7.	Arithmetic Prob. Solving & Concepts:	Minimal computational and reading skills required. Measures 1) understanding of quantitative concepts, processes, vocabulary, generalizations, relationships and 2) ability to apply quantitative thinking appropriately to practical problems. Emphasis on reasoning in numerical situations.
8.	Social Studies Information:	Tests on factual information typically acquired in grades 7, 8, and 9, in areas of geography, history and civics. 60 items. Somewhat related to Test 9.
9.	Social Studies Study Skills:	Measures two relevant skills: 1) map reading and interpretation (scales, symbols, land and water shapes, associations of people and things in particular areas); and 2) ability to read and interpret

TABLE 4 (continued)

	information given in graphs, tables and charts (relationships, trends, drawing valid inferences).
10. Science:	55 items of information generalizations; emphasis reflects typical curricular offerings for grades 7 - 9. Includes life science, earth science, physical science, conservation, health.

TABLE 5: Short Descriptions of the Nine Subtests of the Iowa Tests of Educational Development.[1]

1.	Social Studies Background:	Your score on this test indicates how well you understand important ideas and concepts in history, geography, economics, and civics.
2.	Natural Sciences Background:	This test measures your knowledge of the laws of nature and your understanding of the important part science plays in the world today.
3.	Correctness of Expression:	Your score on this test indicates your ability to write correctly, to use proper words in expressing your ideas, and to organize your writing sensibly.
4.	Quantitative Thinking:	This test measures your ability to use arithmetic and mathematical principles in the solution of practical problems.
5.	Reading -- Social Studies:	Your score on this test indicates your ability to understand what you read in political science, history, economics, etc., and your ability to do logical thinking about what you read.
6.	Reading -- Nat. Sciences:	This test measures your ability to locate and critically evaluate the important facts presented in discussion of scientific matter.
7.	Reading -- Literature:	Your score on this test indicates how well you can read and understand the various types of prose and poetry.
8.	General Vocabulary:	This test measures your ability to understand the meanings of words.
9.	Use of Sources of Information:	This test indicates whether you know where to go to get the facts you need in order to make intelligent judgments and decisions. It measures your knowledge of how to use a dictionary, an encyclopedia, an atlas, and other sources of information.

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[1] Quoted from Your Scores on The Iowa Tests of Educational Development and What They Mean, sixth edition, 1958.

Metropolitan has 10.

School Data Variables 16 through 19 were taken from school records. Total absences (variable 16) is simply the number of days during the year the student was absent. Total tardy (variable 17) is the number of times during the year the student entered school after official start of school (8:05 a. m.) and before 11:30 a. m. Variable 18 is the total days suspended. Suspension refers to exclusion from school for an indefinite period, usually in force until the parent appears with the student before school authorities. Total dismissed (variable 19) is the number of times during the year that the student was allowed to leave school after 8:05 a. m.

Variable 20 was available for teacher judgment of work habits, but it was not used; it was left blank. Variable 21 is teacher judgment of the conduct of the student; 1 stands for excellent, 2 for average and 3 for unsatisfactory.

Teacher Variables In addition to finding the relationships of the foregoing variables to marks, it was also of interest to know if particular teachers differed in the average marks they gave. For example, if the overall average for a given course were B+, but the average for a particular teacher were C+, then one could explain more variation in marks by knowing whether students were or were not members of that particular class.

Twenty places (variables 22 - 41) were reserved for teacher; teachers in each subject area were numbered separately, always starting with 22. For any given set of analyses by subject, including all classes, a given variable number stands for a particular person; e.g., "Teacher 23" for 7th grade Social Studies is the same person as "Teacher 23" for 8th grade Social Studies, but not the same person as "Teacher 23" for 8th grade Mathematics. There were eleven Social Studies teachers (22 - 32); however, only three of those (22 - 24) taught 7th grade and only six (26 - 31) taught freshman classes. It becomes apparent that, for any one equation, only a few of the teacher variables will be used. If a student is in a particular teacher's class, he gets a "1" on the corresponding variable; if he is not, he gets a "0". A student will have only a single "1" in the variables assigned to teachers.

Associated with each regression in the appendix is a table of means and standard deviations, which includes the teacher variables. The mean for a teacher turns out to be the proportion of the students of that subject/year which she teaches. (The means for all the teachers in a single analysis will sum to 1.00 (100%). Obviously all the students who take a subject are in one class or another. A *positive* correlation between a "teacher variable" and mark indicates that that teacher's marks average *higher* than other teachers' marks.

Phase and Mark   Variable 42 is phase for the particular subject under analysis. A "1" stands for phase 1, the lowest phase, and "5" stands for the highest phase, sometimes independent study. Variable 43 is mark for the particular subject under analysis, where 4 stands for A, 3 for B, 2 for C, 1 for D, and O for F. The teacher variables, and the phase and mark variables, are different from regression to regression, as reflected in the tables following each regression.

Introduction to Tables

Means, standard deviations, and correlations for all variables are obtained as by-products of the multiple correlation process. Tables 6 and 7 summarize some of these data.

Table of N Table 2 shows the number of students that made up the data for each subject/year combination. As would be expected, the "basic subjects" (English, Mathematics, Science, and Social Studies) are taken by almost everybody in the lower years of high school. As students progress through the upper years, only English continues to be uniformly required.

Final Equations Tables 8 and 9 present the equation for each subject/year combination which contains the last variable to make a significant contribution to the multiple correlation (the last significant step of the stepwise regression). Each row contains the standardized weights for the variables used in that equation. Rank order of these weights, as well as the size of the weights, gives an indication of the relative importance of the relationship of the variables to final mark in each subject.

Small Weights An informal evaluation of the size of the beta primes in Tables 8 and 9 indicated that weights of .15 or smaller really do not add much to the equation. However, when variables once enter the equation, they are retained in it, no matter how much the weight decreases in subsequent steps. A case in point is 1972 Science. When variables are

TABLE 6: Means and Standard Deviations for "Constant" Variables in Multiple Regressions.[1]

NO.	VARIABLE NAME:	MEAN		STANDARD DEV.	
	School Year:	1972	1971	1972	1971
	Number:	211	227	211	227
1	Calif. Stud. Meth; School Att.	31.1	32.0	10.4	8.2
2	Mechanics of Study	36.2	39.3	11.8	9.2
3	Planning and Systems	17.0	17.6	6.3	5.3
4	(No variable)	-	-	-	-
5	Verification Score	22.7	24.6	6.7	4.6
6	Word Knowledge	54.6	51.4	17.7	23.8
7	Reading	52.9	49.8	17.8	23.7
8	Spelling	50.4	48.9	17.0	22.8
9	Language	48.5	45.4	15.5	21.9
10	Language Study Skills	54.4	50.2	17.4	23.9
11	Arith. Comp.	45.1	43.9	15.6	21.6
12	Arith. Prob. Solv.	48.0	46.6	15.7	21.7
13	Social Studies Infor.	51.8	48.9	15.0	23.8
14	Social Studies St. Skills	53.6	47.5	15.9	23.2
15	Science	54.0	50.2	16.6	23.9
16	Total Absences	5.2	6.0	6.7	6.5
17	Total Tardy	1.0	1.3	3.1	2.9
18	Total Expelled	.05	.03	.69	.84
19	Total Dismissed	.54	.89	1.0	1.4
20	(No variable)	-	-	-	-
21	Total Conduct	4.2	4.7	.58	1.3

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[1] Since regressions for the various subjects had different N's, data were selected from the analysis with the largest N (English; for all classes, except Social Studies for Class of 1971).

TABLE 8 (1972-1971) Standardized (Beta) Weights

R^2	No. of Steps	Junior High School	School Attit. 1	Study Mec. 2	Plan. & Syst. 3	Veri. Score 5	Word Know. 6	Reading 7	Spelling 8	Language 9	Lang. St. Skill 10	Arith. Comp. 11	Arith. Prob. S 12	Soc. St. Infor. 13	Soc. St. Skills 14	Science 15	Tot. Absences 16	Tot. Tardy 17	Tot. Suspend. 18	Tot. Dismiss. 19	Conduct 21	Phase 42	Teachers		
.26	8	1972 English		.11					-.32	.27		.35					-.19			.10	-.16	-.14			
		1971 English																							
.36	6	1972 Math	.13							.26							-.14				-.15	-.20	.16		
.40	10	1971 Math		.13				-.32	-.23			.50			.11		-.16				-.29	.29	.19	-.11	
.43	7	1972 Science	.18	.27		-.30				.12		.21									-.24		.49		
.41	4	1971 Science					-.36	.42													-.45	.34			
.35	7	1972 Soc. Stu.		.12							.19	.14				-.15					-.18	.22	-.37		
.28	8	1971 Soc. Stu.	.21							-.23	-.32										-.10	.35	-.17	.35	.24
.38	8	1972 Lang.								.35		.11				-.17	-.20		-.11		-.24	.15	.20		
.27	10	1971 Lang.		.23		-.25	-.52				.20	.40						-.11		.13	-.31	.25	.14		

TABLE 7: Means and Standard Deviations for "Constant" Variables in Multiple Regressions.[1]

NO.	VARIABLE NAME:	MEAN				STANDARD DEVIATION			
	School Year:	1970	1969	1968	1967	1970	1969	1968	1967
	Number:	192	197	172	170	192	197	172	170
1	Calif. Study Method; School Att.	31.5	32.1	31.6	32.3	6.9	6.8	7.6	6.9
2	Mechanics of Study	40.1	40.9	40.6	41.3	6.9	7.0	7.8	6.5
3	Planning and System	17.7	17.1	16.7	16.9	4.7	4.8	5.2	4.3
4	(No variable)	-	-	-	-	-	-	-	-
5	Verification Score (ITED)	24.7	24.7	24.2	25.1	3.2	3.0	4.0	2.8
6	Social Studies Background	14.3	16.7	17.8	15.7	6.6	7.2	8.6	9.1
7	Natural Science Background	15.7	18.1	17.9	17.2	7.3	7.8	9.0	9.0
8	Correctness of Expression	13.9	16.2	16.9	13.9	6.4	6.6	8.1	8.8
9	Quantitative Thinking	13.7	15.7	18.3	15.6	6.3	7.8	8.7	9.7
10	Reading Social Studies	15.7	16.9	17.8	17.5	7.0	8.3	9.6	9.2
11	Reading Natural Science	16.3	18.5	19.0	16.6	7.7	8.1	10.0	9.8
12	Reading Literature	14.9	17.0	16.9	16.0	7.2	7.6	9.3	9.5
13	General Vocabulary	16.7	18.7	19.7	18.6	6.8	7.5	8.3	9.0
14	Use of Sources	15.8	11.0	18.8	15.1	8.5	11.2	10.0	10.8
15	(No variable)	-	-	-	-	-	-	-	-
16	Total Absences	8.6	10.2	11.7	13.0	8.7	9.5	11.8	10.8
17	Total Tardy	1.5	2.0	2.6	3.5	3.9	3.8	4.4	5.5
18	Total Expelled	.23	.27	.20	.08	1.2	.99	.72	.71
19	Total Dismissed	1.5	1.6	1.9	2.2	2.1	1.9	2.2	2.2
20	(No variable)	-	-	-	-	-	-	-	-
21	Total Conduct	4.3	4.3	4.5	4.4	.93	.88	.96	.87

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[1] Since regressions for the various subjects had different N's, data were selected from the analysis with the largest N (English; for all classes, except Social Studies for Class of 1971).

TABLE 9

R²	Last Significant Equations High School	School Attitude 1	Mech. of Study 2	Planning & Systm 3	Verification Scor. 5	Unstand. Soc. Con. 6	Nat. Sci. Backgr'd 7	Corr. of Express. 8	Quantat. Thinking 9	Reading Soc. St. 10	Reading Nat. Sci. 11	Reading Literat. 12	General Vocab. 13	Use Source Infor. 14	Blank 15	Total Absences 16	Total Tardy 17	Total Suspended 18	Total Dismissed 19	Conduct 21	Phase 42		Teachers			Number of Step
.29	'70 Eng.	.19								.20							-.22			-.30		.22	.19			6
.32	'69	.21				-.17	-.22	.33		.31										-.27		.12	.11			8
.46	'68	.23	.27		-.35			.12									-.10			-.14	.16	.41	.14			9
.46	'67	.16	.28		-.22			.26						-.24		-.23	-.07			-.11		.40	-.12	.10		11
.33	'70 Math	.10						.20	.38				-.33	.22					-.12	-.18		.40	.20			9
.39	'69			.11				.28								-.20	-.14			-.38		-.24	-.14	-.11		8
.27	'68	.33			-.19											-.22						.27	.22	.12		6
.36	'67	.26	.27					.29														.19	-.15			5
.38	'70 Scien.	.21									.22							-.11		-.33		.07	-.26			6
.53	'69		.24						.22		.39	-.28				-.32				-.24		-.30	.27			8
.39	'68	.44	.25		-.35											-.23				-.12		.12				6
.36	'67	.15	.24				-.30		.37							-.29						.17	.14			7
.42	'70 So. St.	.35						.33									-.13		-.18	-.13	-.23	-.13	.21	.13		9
.31	'69		.17													-.22			-.12	-.15		-.35	-.16			6
.37	'68		.44		-.29	.20										-.17					-.19	-.27	.13	.18		8
.37	'67			.26		-.29	-.23		.43			.24				-.14			.16		.31	-.25	-.16			10
.38	'70 Lang.			.19				.19			.17									-.16	.27	-.15				6
.40	'69									-.40		.24	.28	.19		-.21		.11			.20	.24	-.14			9
.52	'68	.18		.19	-.21		-.49	.65		.39			-.55			-.16			.17		.11	-.07	-.09			12
.58	'67			.20		-.57	-.52		.63	.39			-.21			-.36	.20		.25		.38	.17	.09	-.22		13

considered singly, teacher is most important, and enters the equation first. Then, with teacher in, the language subtest is second most important, by the stepwise criteria. As other variables are added, however, they reduce the weight on language, until the last step shows that the other variables are relatively more important than language; it loses almost all its former importance.

Specific Observations

Marks Table 10 presents average mark by subject/year combinations. The rows and columns were averaged to give relative overall estimates of class and subject means. When looking at marks per se, not correlated with anything else, certain features stand out. The average of all marks is 2.91, but subject areas differ. Math marks are lowest; this is particularly evident in 7th and 8th grade. Science and social studies marks are highest; the 8th grade science mark is remarkably high: 3.78. The lowest average mark in the high school belongs to 12th grade math (2.58), which, paradoxically, has the highest mean phase (compare Tables 10 and 11).

Phase Average phase, by subject/year combinations, is presented in Table 11. Since students in grades 7 and 8 (1972 and 1971) are predominantly in phases 1 - 4, and students in grades 9 - 12 (1967 - 1970) are predominantly in phases 2 - 5, mean phase isn't really comparable across all years. The means in each row have been averaged to give an estimate (regardless of the number of students for any given subject) of average phase for each year. Average phase for each year rises through-

TABLE 10 : Average Mark by Subject and Year

SUBJECT: / YEAR:	English	Math	Science	Soc.Stud	Lang.	Mean of Row*
1972	3.11	2.53	3.21	3.16	2.90	2.98
1971		2.49	3.78	3.14	2.69	3.02
1970	2.64	2.78	2.76	2.90	2.64	2.74
1969	2.80	2.85	2.61	2.85	2.79	2.78
1968	2.84	2.84	3.11	3.03	3.17	3.00
1967	2.84	2.58	3.02	3.21	2.98	2.93
Mean of Column*	2.87	2.68	3.08	3.05	2.86	2.91

*Unweighted by N's

TABLE 11: Average Phase by Subject and Year

SUBJECT: / YEAR:	English	Math	Science	So. Stud.	Lang.	Mean of Row*
1972	3.01	3.03	3.09	3.05	2.85	3.01
1971	3.00	2.98	3.15	3.14	2.99	3.05
1970	3.21	3.19	3.27	3.22	3.36	3.25
1969	3.35	3.31	3.43	3.37	3.29	3.35
1968	3.51	3.61	3.55	3.63	3.53	3.57
1967	3.19	3.64	3.61	3.47	3.42	3.47
Mean of Column*+	3.31	3.44	3.47	3.42	3.40	3.41

*Unweighted by N's
+High School only (1967-1970)

TABLE 12: Standard Deviation of Marks by Subject and Year

SUBJECT: / YEAR:	English	Math	Science	Soc. Stud.	Lang.
1972	.70	1.01	.71	.82	.94
1971		1.02	.48	.68	.95
1970	.79	.83	.79	.91	.97
1969	.83	.84	.98	.83	.97
1968	.79	.87	.91	.79	.82
1967	.77	.79	.89	.70	.84

out high school; presumably, students stick with those subjects in which they are strong, and drop-outs from school would be mainly from the lower phases.

Of all subjects, English has the lowest average phase in high school, though there is mostly little difference from one subject to another. The means in each column have been averaged (only for grades 9 - 12, and regardless of the number of students in a class) to give an estimate of average phase for each subject in high school.

Teacher One salient feature of the regressions taken as a whole is that the variable of "teacher" enters all but two; the two exceptions are in Jr. High. Almost all equations for high school classes include two teachers, and six equations have three teachers. (8th grade social studies also has three.) Not only are teachers in the equations, but when the weights are rank ordered, seven equations have teacher first; 16 equations have teacher first, second, and/or third. Finally, there are eleven individual teachers who enter 2 or 3 different equations (the same subject, different years); the weights are usually in the same direction, either positive or negative.

Average mark does not reveal what a teacher is rewarding, only how much. From one subject to another, there could, and perhaps should, be considerable variation in what is rewarded. However, within a subject/year combination, all teachers should work with uniform criteria, and one result would be the same average mark (and if this were the case, teacher would not enter the equation).

Conduct A teacher-assigned score, conduct, enters 14 out of 15 equations for 7th through 9th grade; in about seven cases it would be considered a truly important variable. In grades 10 - 12, conduct enters seven equations, and only for 10th grade math and English is it really important, ranking first and third, respectively. By subject area, every equation for English, as well as five out of six for science, contains conduct; about a third of these have significant weights.

The conduct rating was given at the end of the year, at the same time as grade. It is interesting to speculate on the possibility that teachers gave bright (or harder-working) students good conduct scores, or that they gave well-behaved students better marks. It is most likely, however, that success generally eliminated the desire to gain attention in "undesirable" ways.

Absences Total days absent from school seems to have a significant influence on marks in 10th, 11th, and 12th grade (enters 12 of 15 equations), less in 7th and 8th grade (4 of 10 equations). This could be the result of an underlying variable (e. g., interest in school) which accounts for a correlation between attendance and mark, or it could be a direct reflection of the amount of content missed.

Achievement Subtests With a few exceptions, there is no clear pattern of influence for achievement scores, though these enter equations frequently. For high school English and math, Correctness of Expression enters strongly in three out of four equations. For 7th and 8th grade, the Language and Arithmetic Computation subtests enter most frequently; one or both appear in every 7th grade equation.

It should be noted that negative weights on achievement variables do not mean that skill in the area is a liability to the student. Rather, skill in that area enables the student to score higher on some other subtest than other persons of like ability on that subtest. For example, in three out of four instances, General Vocabulary has a negative weight; it is easy to see how exceptional ability in this area could contribute to inflated scores elsewhere.

It is interesting to note that seniors scored lower on the Achievement subtests than did the juniors. Similarly, the 8th grade (1971) averaged lower than the 7th grade.

Language Language as a subject area seems to have patterns of correlation and weighting which make it stand out from all of the other subjects. A possible source of trouble in interpretation is the fact that all the languages given at a certain grade level were analyzed together for that regression.

Phase enters all six regressions. All weights are positive. All but grade 7 and 11 are clearly important. In Table 13, phase and mark are consistently correlated for language, with an absolute mean of .35 for all grades. Language classes are so small that students from several phases are combined into one class; in this situation it would be very difficult for a teacher to do other than view the quality of work in absolute terms, and reward accordingly.

Planning and System enters the equations very infrequently: not at all for grades 7 and 8, and only five times in grades 9 through 12, one of which is insignificant. However, three out of four high school language class

TABLE 13 : Correlations of Phase and Mark

SUBJECT / YEAR	English	Math	Science	Soc. Stud.	Language
1972	.11	.38	.24	.41	.29
1971		.44	.43	.19	.18
1970	.08	.21	.11	.13	.43
1969	.30	.32	.20	.25	.38
1968	.40	.31	.26	.26	.30
1967	.24	.28	.25	.36	.50

TABLE 14: Correlations between Phase (variable 42), Mark (variable 43), and Study Methods (variables 1-3) and Achievement Subtests (variables 6-15) for English, by Year of Graduation.

		1972			1970			1969			1968			1967	
California Study Methods		42	43		42	43		42	43		42	43		42	43
	1	.24	.20		.27	.31		.32	.37		.36	.39		.26	.40
	2	.31	.22		.52	.13		.42	.34		.39	.26		.40	.33
	3	.15	.14		.23	.26		.13	.25		.24	.31		.26	.30
Achievement Sub-tests	6	.44	.23		.54	.20		.53	.24		.56	.24		.38	.21
	7	.48	.22		.33	.14		.47	.17		.29	.15		.21	.10
	8	.44	.20		.60	.19		.57	.37		.53	.31		.29	.24
	9	.53	.33		.46	.12		.54	.29		.53	.29		.38	.24
	10	.48	.31		.43	.25		.58	.27		.48	.28		.28	.13
	11	.38	.33		.48	.16		.53	.26		.41	.27		.34	.22
	12	.43	.30		.54	.12		.58	.29		.46	.31		.40	.25
	13	.33	.16		.54	.24		.60	.28		.47	.25		.36	.13
	14	.33	.22		.61	.18		.33	.22		.55	.28		.37	.21
	15	.23	.13												

equations include Planning, and for 9th graders, it is second only to phase in rank order.

Achievement subtest scores are another noticeable feature of the language regressions. 10th through 12th grade language class equations contain both Social Studies Reading (which appears in only two other equations) and General Vocabulary (which appears in only one other equation) but the pattern of weighting is confused. Social Studies Reading is weighted negatively for sophmores and positively for juniors; General Vocabulary is positively weighted for sophmores and negatively for juniors. The rank orders of these weights are 1 and 2, and 4 and 2, respectively, so cannot be dismissed as unimportant to the equations. This may reflect extreme differences either in style of teaching or in criteria for marking from one grade level to another.

Study Habits Inventory Attitude Toward School enters 15 equations in all; of the rest, all but our three contain one or two of the other subtests (including Verification Score). Four out of six English, math and science equations contain Attitude. In general, Attitude scores seem less important for 7th and 8th grades than for 9th through 12th grades.

In the correlation table abstracted for 12th grade English (Table 14), Attitude correlates with mark .39. The manual for the Survey cites a correlation of .47 between Attitude and grade point average, and .29 between attitude and intelligence.

Mechanics of Study enters five 7th and 8th grade equations (importantly in two), and eight for grades 9 - 12, all of which are important. There seem to be some patterns to the latter. By years, senior English, math and science regressions contain Mechanics, with weights ranked second, second, and fourth, respectively; junior English, science and social studies regressions (this last is treated in some detail elsewhere) have Mechanics weights ranked third, third, and first. Science, as a subject area, has Mechanics in four out of six equations; weights and rank orders are all important. Planning and System subscores are dealt with in the paragraph on language.

The Verification Score has special meaning in relation to the other subtests of the Study Habits Survey. Its purpose is to check the validity of the other study methods scores; students sometimes answer randomly, or inconsistently, or, more often, are striving for socially desirable answers. The Verification score itself does not correlate significantly with marks, but by correcting for invalidly high individual scores, it contributes to the significance of the other subtests and, of course, achieves a weight of its own (in this case, negative). It enters only equations containing one or two other Survey variables, subtests and functions only in relation to those variables. (The Verification subtest is an example of a supressor variable.)

The juniors evidently varied much more highly on the Verification subtest with a corresponding effect on the other subtests, and it enters the equation for every subject. In English, science, and social studies, it is rank ordered second.

Sample Regression: 1968 Social Studies

Table 15 shows the eight variables which contribute significantly to the

1968 Social Studies marks. Step one shows that the most important single variable for predicting mark is Social Studies Background (variable 6); i. e. it has the largest correlation with mark. The second most important variable, with Background in the equation, is Teacher 28. That teacher, with a negative weight, marks students lower, on the average, than do other teachers in the course.

Mechanics of Study (variable 2) is next most important, with a weight of . 23. However, when the invalidity of some students' scores is subtracted from the equation via their verification score (step 4 of the regression), the "usefulness" of the Mechanics of Study Score increases to . 41. In this case, Verification Score, which has very little correlation with mark (. 07), but is an important predictor of mark (negatively weighted), is a "suppressor" variable. Teacher 27, absences, Teacher 31, and phase fill out the equation.

The final equation shows Mechanics of Study (variable 2) to be the most important variable (in combination with the other seven), Verification Score (variable 5) is second most important, Teacher 28 and Social Studies Background are third and fourth respectively.

Phase (variable 42), with a negative weight, is fifth most important. The correlation between phase and social studies mark is . 26, positive when computed by itself. One interpretation of this seeming paradox might be: for any particular score on Social Studies Background and Mechanics of Study (the two variables whose weights increased when phase entered the equation), phase varies inversely with mark. (With all the other variables in the equation, Teacher 27 no longer attains a "significant" weight.)

None of the regressions present a shining example of what the phase system could be, but this one was selected for discussion because it is interesting when related to the intended marking philosophy. An "application and ambition" variable is ranked first, but the equation also contains both teacher and phase.

General Observations on Phase

Considering the size of the usual correlations between standardized achievement scores and marks (ranging up to .60 or so), and the California Study Habits Survey and grade point average (.57), it is interesting to note the rather low multiple correlations in this study. They are typically in the .30's and .40's. This is unquestionably an effect of the phase system. If students are grouped by "past achievement", taking into account all the things which contributed to said achievement, and the various groups are rewarded with nearly the same average marks, high correlations will be effectively erased.

Indications of Success The general thrust of the phase system is that low-ability students are no longer predestined for low marks; high-ability students will not "breeze through" but will be adequately challenged. That this seems to be working to some extent in most classes is borne out by several observations. 1) Achievement scores correlate more highly with phase than with mark (see for example correlations in Table 16). 2) One or another of the Study Habits subtests enters all but three equations; indirectly, these are measures of application and ambition on the part of the student.

TABLE 15: Significant Steps from Stepwise Multiple Correlation: Social Studies marks for Class of 1968 as dependent variable. Multiple correlations, variable names, standardized beta weights and F ratios for each step.

Standardized Beta Weights

F Ratio Step	Step No.	R	R^2	6 So.St.Bkg	28 Teacher	2 Study Mc	5 Veri.Scr.	27 Teacher	16 Tot.Absc	31 Teacher	42 Phase
20.9	1	.35	.12	.35							
17.5	2	.46	.21	.31	-.31						
9.5	3	.51	.26	.25	-.28	.23					
6.7	4	.54	.29	.22	-.27	.41	-.25				
4.8	5	.56	.32	.23	-.26	.43	-.28	.15			
4.4	6	.58	.34	.19	-.26	.39	-.26	.14	-.15		
3.1	7	.59	.35	.15	-.24	.38	-.25	.15	-.15	.13	
4.2	8	.61	.37	.20	-.27	.44	-.29	.13	-.17	.18	-.19
2.0	9										

TABLE 16: Correlations between Phase (variable 42), Mark (variable 43), and Study Methods Survey (variables 1-3) and Achievement Subtests (variables 6-15) for Science, by Year of Graduation.

California Study Methods		1972		1971		1970		1969		1968		1967	
		42	43	42	43	42	43	42	43	42	43	42	43
	1	.23	.28	.27	.14	.32	.30	.33	.40	.34	.49	.26	.35
	2	.31	.24	.45	.24	.51	.14	.46	.38	.30	.32	.35	.40
	3	.20	.17	.17	.14	.22	.23	.12	.23	.22	.41	.16	.23
Achievement Subtests	6	.37	.24	.25	.17	.55	.17	.55	.37	.37	.15	.55	.32
	7	.40	.26	.24	.21	.39	.13	.47	.34	.11	.05	.47	.10
	8	.35	.27	.27	.20	.54	.10	.56	.34	.32	.21	.39	.34
	9	.46	.35	.33	.22	.49	.19	.57	.45	.43	.28	.54	.36
	10	.45	.29	.26	.19	.45	.15	.58	.35	.25	.16	.46	.20
	11	.34	.29	.32	.23	.47	.25	.55	.42	.20	.17	.55	.23
	12	.41	.30	.29	.17	.38	.16	.59	.30	.19	.24	.48	.26
	13	.39	.19	.32	.17	.49	.21	.61	.31	.33	.18	.42	.20
	14	.38	.21	.33	.20	.65	.23	.30	.18	.38	.28	.49	.36
	15	.32	.13	.32	.17	-	-	-	-	-	-	-	-

Indications of Difficulty Phase enters eight equations for grades 7 and 8; seven of these have positive weights. Three high school social studies regressions include phase, with mixed weighting. Where phase has a negative weighting, it is operating as a supressor variable: for any given level of competence, those in higher phases received lower marks. (Phase in language is discussed elsewhere.) Substantial correlations between phase and mark show up in Table 13. The highest correlations are in language and the lowest (on the average) are in English. Many of these correlations are mediated to a large extent by other variables.

Ideally, phase should have no bearing on mark. It may be that teachers found themselves a little at sea in an unfamiliar system, and had a difficult time readjusting their scale of values, especially in grades 7 and 8. This could also account for the disturbing frequency with which teachers themselves entered the regressions.

The phase system can claim partial success, but in many classes, it is being subverted to some degree, from mild to overwhelming. As teachers, and students, become accustomed to the system, they will probably approach more closely its intended purposes.

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Table 17 : Significant Steps from Stepwise Multiple Correlation: Social Studies marks for Class of 1972 as dependent variable. Multiple correlations, variable names, standardized beta weights and F ratios for each step

Standardized Beta Weights

F Ratio for Step	Step No.	R	R^2	42 Phase	24 Teacher	10 Read.S.St.	21 Conduct	2 Mec.Stud.	15 Science	11 Arith.Cp.						
43.2	1	.41	.17	.41												
21.7	2	.50	.25	.39	-.28											
9.2	3	.53	.28	.29	-.29	.20										
8.5	4	.56	.31	.25	-.38	.22	-.19									
3.3	5	.57	.32	.23	-.37	.19	-.19	.12								
3.6	6	.58	.33	.23	-.37	.25	-.18	.13	-.13							
3.8	7	.59	.35	.22	-.37	.19	-.18	.12	-.15	.14						
(1.4)	8															

N = 210

Table 18 : Means and Standard Deviations for "Non-constant" Variables in M. R. involving Social Studies . Class of 1972

Number	Variable	Mean	S. D.
22	Teacher	.19	.39
23	Teacher	.21	.41
24	Teacher	.60	.49
	Teacher		
	Teacher		
	Teacher		
42	Phase	3.05	.81
43	Mark	3.16	.82

Table 19 : Significant Steps from Stepwise Multiple Correlation: Social Studies marks for Class of 1971 as dependent variable. Multiple correlations, variable names, standardized beta weights and F ratios for each step

Standardized Beta Weights

F Ratio for Step	Step No.	R	R^2	1 Sch. Attit.	25 Teacher	42 Phase	23 Teacher	22 Teacher	10 Lang. StSk							
15.0	1	.25	.06	.25												
11.1	2	.33	.11	.27	-.21											
22.1	3	.43	.19	.23	-.37	.33										
13.6	4	.48	.23	.24	-.30	.41	.25									
5.3	5	.50	.25	.22	-.15	.39	.40	.21								
3.9	6	.52	.27	.22	-.14	.36	.41	.22	.12							
2.2	7															
(1.1)	8															

N = 227

Table 20 : Means and Standard Deviations for "Non-constant" Variables in M. R. involving Social Studies . Class of 1971

Number	Variable	Mean	S. D.
22	Teacher	.29	.46
23	Teacher	.33	.47
24	Teacher	.12	.33
25	Teacher	.26	.44
	Teacher		
	Teacher		
42	Phase	3.14	.72
43	Mark	3.14	.68

Table 21 : Significant Steps from Stepwise Multiple Correlation: Social Studies marks for Class of 1970 as dependent variable. Multiple correlations, variable names, standardized beta weights and F ratios for each step

Standardized Beta Weights

F Ratio for Step	Step No.	R	R^2	1 Sch.Attit.	8 Co.of Exp	19 Tot.Dism	28 Teacher	17 Tot.Tard.	26 Teacher	42 Phase	21 Conduct	31 Teacher				
41.8	1	.46	.21	.46												
15.7	2	.54	.29	.40	.28											
8.9	3	.57	.33	.39	.31	-.20										
4.8	4	.59	.35	.37	.31	-.21	-.15									
4.0	5	.60	.36	.35	.31	-.20	-.15	-.13								
2.6	6	.61	.38	.34	.28	-.21	-.14	-.13	.11							
4.1	7	.63	.39	.34	.37	-.19	-.14	-.13	.16	-.17						
3.9	8	.64	.41	.35	.35	-.18	-.14	-.14	.16	-.20	-.13					
3.6	9	.65	.42	.35	.33	-.18	-.13	-.13	.21	-.23	-.13	.13				
(1.45)	10															

N = 156

Table 22 : Means and Standard Deviations for "Non-constant" Variables in M. R. involving Social Studies . Class of 1970

Number	Variable	Mean	S. D.
26	Teacher	.61	.49
27	Teacher	.16	.37
28	Teacher	.13	.34
29	Teacher	.10	.30
30	Teacher	.08	.28
31	Teacher	.03	.18
42	Phase	3.22	.77
43	Mark	2.90	.91

Table 23 : Significant Steps from Stepwise Multiple Correlation: Social Studies marks for Class of 1969 as dependent variable. Multiple correlations, variable names, standardized beta weights and F ratios for each step

Standardized Beta Weights

F Ratio for Step	Step No.	R	R^2	16 Tot.Abse.	28 Teacher	2 Mech.Stud	27 Teacher	21 Conduct	19 Tot.Dism							
21.4	1	.35	.12	-.35												
21.8	2	.48	.23	-.36	-.33											
6.4	3	.51	.26	-.31	-.33	.18										
4.4	4	.53	.28	-.30	-.34	.18	-.14									
2.9	5	.54	.29	-.25	-.35	.18	-.14	-.13								
2.9	6	.55	.31	-.22	-.35	.17	-.16	-.15	-.12							
2.2	7															

N = 158

Table 24 : Means and Standard Deviations for "Non-constant" Variables in M. R. involving Social Studies. Class of 1969

Number	Variable	Mean	S. D.
26	Teacher	.04	.21
27	Teacher	.13	.34
28	Teacher	.06	.23
29	Teacher	.15	.35
30	Teacher	.33	.47
31	Teacher	.28	.45
32	Teacher	.01	.08
42	Phase	3.37	.76
43	Mark	2.85	.83

Table 25 : Significant Steps from Stepwise Multiple Correlation: Social Studies marks for Class of 1968 as dependent variable. Multiple correlations, variable names, standardized beta weights and F ratios for each step

Standardized Beta Weights

F Ratio for Step	Step No.	R	R^2	6 Soc.St.Bk	28 Teacher	2 MechStud	5 VeriScor	27 Teacher	16 Tot.Absc.	31 Teacher	42 Phase
20.9	1	.35	.12	.35							
17.5	2	.46	.21	.31	-.31						
9.5	3	.51	.26	.25	-.28	.23					
6.7	4	.54	.29	.22	-.27	.41	-.25				
4.8	5	.56	.32	.23	-.26	.43	-.28	.15			
4.4	6	.58	.34	.19	-.26	.39	-.26	.14	-.15		
3.1	7	.59	.35	.15	-.24	.38	-.25	.15	-.15	.13	
4.2	8	.61	.37	.20	-.27	.44	-.29	.13	-.17	.18	-.19
2.0	9										

N = 152

Table 26 : Means and Standard Deviations for "Non-constant" Variables in M. R. involving Social Studies . Class of 1968

Number	Variable	Mean	S. D.
26	Teacher	.02	.14
27	Teacher	.02	.14
28	Teacher	.10	.30
29	Teacher	.29	.46
30	Teacher	.27	.45
31	Teacher	.29	.46
32	Teacher	.01	.01
42	Phase	3.63	.80
43	Mark	3.03	.79

Table 27 : Significant Steps from Stepwise Multiple Correlation: Social Studies marks for Class of 1967 as dependent variable. Multiple correlations, variable names, standardized beta weights and F ratios for each step

Standardized Beta Weights

F Ratio for Step	Step No.	R	R^2	3 Plan &Stm	9 Qun.Think	42 Phase	31 Teacher	[illegible] Teacher	19 Tot Dism.	7 Nat.Scien.	16 Tot.Absce	12 Read Lit.	6 So.St.Bkg			
29.5	1	.41	.17	.41												
11.6	2	.48	.23	.37	.25											
4.4	3	.51	.26	.33	.17	.18										
4.9	4	.53	.28	.31	.19	.28	-.19									
3.8	5	.55	.30	.31	.22	.33	-.24	-.15								
3.1	6	.56	.31	.30	.23	.33	-.27	-.14	.13							
2.7	7	.57	.33	.29	.34	.32	-.26	-.14	.13	-.16						
3.2	8	.59	.34	.26	.32	.31	-.26	-.14	.16	-.18	-.14					
2.0	9	.59	.35	.26	.25	.28	-.25	-.13	.16	-.23	-.14	.15				
3.5	10	.61	.37	.26	.43	.31	-.25	-.16	.16	-.23	-.14	.24	-.29			
1.4	11															

N = 146

Table 28 : Means and Standard Deviations for "Non-constant" Variables in M. R. involving Social Studies . Class of 1967

Number	Variable	Mean	S. D.
26	Teacher	.04	.20
28	Teacher	.01	.08
29	Teacher	.10	.30
30	Teacher	.05	.21
31	Teacher	.10	.30
32	Teacher	.70	.46
42	Phase	3.47	.81
43	Mark	3.21	.70

Table 29 : Significant Steps from Stepwise Multiple Correlation: Language marks for Class of 1972 as dependent variable. Multiple correlations, variable names, standardized beta weights and F ratios for each step

Standardized Beta Weights

F Ratio for Step	Step No.	R	R^2	9 Language	23 Teacher	21 Conduct	16 Tot.Abse.	42 Phase	18 Tot Expel	15 Science						
23.0	1	.35	.12	.35												
25.9	2	.50	.25	.36	.35											
8.4	3	.53	.28	.35	.28	-.21										
9.6	4	.57	.32	.34	.27	-.24	-.20									
4.6	5	.59	.34	.32	.22	-.24	-.21	.15								
4.1	6	.60	.36	.31	.20	-.25	-.21	.16	-.13							
3.9	7	.61	.38	.39	.20	-.24	-.21	.15	-.13	-.15						
2.1	8															

N = 164

Table 30 : Means and Standard Deviations for "Non-constant" Variables in M. R. involving Language . Class of 1972

Number	Variable	Mean	S. D.
22	Teacher	.12	.33
23	Teacher	.73	.45
24	Teacher	.04	.19
25	Teacher	.12	.32
	Teacher		
	Teacher		
42	Phase	2.85	.66
43	Mark	2.90	.94

Table 31 : Significant Steps from Stepwise Multiple Correlation: Language marks for Class of 1971 as dependent variable. Multiple correlations, variable names, standardized beta weights and F ratios for each step

Standardized Beta Weights

F Ratio for Step	Step No.	R	R^2	21 Conduct	42 Phase	22 Teacher	19 Tot Dism	10 Lang.St.Sk	6 Word Kno	11 Arith Cp.	17 Tot Tard	5 Veri Scr.	2 Stud Mec			
16.3	1	.31	.09	-.31												
7.5	2	.37	.13	-.32	.20											
4.5	3	.40	.16	-.33	.31	.19										
3.3	4	.42	.18	-.32	.30	.16	.13									
3.1	5	.44	.19	-.34	.29	.15	.13	.13								
2.5	6	.45	.21	-.33	.29	.14	.13	.26	-.18							
5.3	7	.47	.23	-.34	.30	.15	.11	.18	-.50	.42						
2.2	8	.49	.24	-.33	.29	.16	.13	.16	-.52	.43	-.11					
1.3	9	.50	.25	-.32	.29	.16	.14	.18	-.52	.42	-.11	-.09				
4.4	10	.52	.27	-.31	.25	.14	.13	.20	-.52	.40	-.11	-.25	.23			
.8	11															

N = 160

Table 32 : Means and Standard Deviations for "Non-constant" Variables in M. R. involving Language . Class of 1971

Number	Variable	Mean	S. D.
22	Teacher	.59	.49
23	Teacher	.25	.43
25	Teacher	.16	.37
	Teacher		
	Teacher		
	Teacher		
42	Phase	2.99	.54
43	Mark	2.69	.95

Table 33 : Significant Steps from Stepwise Multiple Correlation: Language marks for Class of 1970 as dependent variable. Multiple correlations, variable names, standardized beta weights and F ratios for each step

Standardized Beta Weights

F Ratio for Step	Step No.	R	R^2	8 Cor. Exp.	42 Phase	3 Pln. & Stm	21 Conduct	30 Teacher	11 Rd. Nt. Sci							
34.9	1	.45	.20	.45												
13.9	2	.53	.28	.33	.30											
9.8	3	.57	.33	.31	.29	.22										
4.1	4	.59	.35	.28	.29	.20	-.15									
3.0	5	.60	.36	.29	.28	.18	-.16	-.12								
3.6	6	.62	.38	.19	.27	.19	-.16	-.15	.17							
1.8	7															

N = 138

Table 34 : Means and Standard Deviations for "Non-constant" Variables in M. R. involving Language . Class of 1970

Number	Variable	Mean	S. D.
26	Teacher	.03	.17
27	Teacher	.19	.39
28	Teacher	.20	.40
29	Teacher	.35	.48
30	Teacher	.09	.29
31	Teacher	.14	.35
42	Phase	3.36	.53
43	Mark	2.64	.97

Table 35 : Significant Steps from Stepwise Multiple Correlation: Language marks for Class of 1969 as dependent variable. Multiple correlations, variable names, standardized beta weights and F ratios for each step

Standardized Beta Weights

F Ratio for Step	Step No.	R	R^2	13 Gn Vocab	42 Phase	28 Teacher	16 Tot. Abs.	26 Teacher	14 So. St. Skil	10 Rd Soc St	12 Read Lit.	18 Tot Expl.				
30.9	1	.41	.17	.41												
12.4	2	.48	.23	.31	.27											
8.7	3	.52	.27	.27	.24	.21										
5.9	4	.55	.30	.23	.24	.23	-.17									
5.6	5	.57	.32	.23	.22	.22	-.19	-.16								
5.1	6	.59	.34	.19	.22	.22	-.19	-.18	.16							
6.2	7	.61	.37	.40	.22	.22	-.20	-.15	.19	-.28						
4.9	8	.63	.39	.30	.21	.23	-.20	-.15	.18	-.40	.26					
2.8	9	.63	.40	.28	.20	.24	-.21	-.14	.19	-.40	.24	.11				
1.1	10															

N = 157

Table 36 : Means and Standard Deviations for "Non-constant" Variables in M. R. involving Language . Class of 1969

Number	Variable	Mean	S. D.
26	Teacher	.06	.24
27	Teacher	.13	.34
28	Teacher	.13	.34
29	Teacher	.28	.45
30	Teacher	.16	.36
31	Teacher	.20	.40
32	Teacher	.04	.19
42	Phase	3.29	.63
43	Mark	2.79	.97

Table 37 : Significant Steps from Stepwise Multiple Correlation: Language marks for Class of 1968 as dependent variable. Multiple correlations, variable names, standardized beta weights and F ratios for each step

Standardized Beta Weights

F Ratio for Step	Step No.	R	R^2	1 Schol.Att	30 Teacher	42 Phase	32 Teacher	3 Plan &Stm	5 Veri.Scor	8 Cor. Exp.	13 Gen Voc	7 Nt Sci Bk	10 Rd Sa St.	19 Tot Dism	16 Tot Absc	
14.0	1	.34	.12	.34												
7.4	2	.42	.18	.34	-.24											
7.4	3	.48	.23	.30	-.24	.24										
4.5	4	.52	.27	.29	-.26	.20	-.19									
3.3	5	.54	.29	.17	-.26	.21	-.16	.20								
5.6	6	.57	.33	.23	-.23	.20	-.13	.26	-.23							
3.6	7	.59	.35	.21	-.21	.16	-.12	.26	-.24	.17						
17.9	8	.67	.45	.23	-.12	.15	-.11	.21	-.23	.64	-.57					
3.2	9	.69	.47	.21	-.08	.14	-.10	.24	-.24	.69	-.49	-.18				
3.7	10	.70	.49	.21	-.07	.11	-.11	.21	-.22	.65	-.53	-.40	.31			
2.4	11	.71	.50	.20	-.07	.11	-.09	.22	-.22	.67	-.54	-.41	.32	.12		
3.6	12	.72	.52	.18	-.07	.11	-.09	.19	-.21	.65	-.55	-.49	.39	.17	-.16	
1.8	13															

N = 106

Table 38 : Means and Standard Deviations for "Non-constant" Variables in M. R. involving Language . Class of 1968

Number	Variable	Mean	S. D.
26	Teacher	.06	.23
27	Teacher	.36	.48
28	Teacher	.26	.44
29	Teacher	.05	.21
30	Teacher	.21	.41
31	Teacher	.03	.17
32	Teacher	.04	.19
42	Phase	3.53	.52
43	Mark	3.17	.82

Table 39 : Significant Steps from Stepwise Multiple Correlation: Language marks for Class of 1967 as dependent variable. Multiple correlations, variable names, standardized beta weights and F ratios for each step

Standardized Beta Weights

F Ratio for Step	Step No.	R	R^2	42 Phase	31 Teacher	13 Gen Voca	9 Quan Thi	6 Soc.St. Bk	27 Teacher	3 Plan.&St.	16 Tot Absc	19 Tot Dism	26 Teacher	17 Tot. Tard	7 Nat. Scien	10 Rd.Soc.St
19.5	1	.50	.25	.50												
3.6	2	.54	.29	.52	.21											
3.0	3	.57	.32	.54	.23	-.19										
3.9	4	.61	.37	.52	.22	-.39	.29									
2.6	5	.63	.40	.50	.19	-.27	.50	-.34								
2.4	6	.65	.42	.50	.20	-.34	.59	-.38	.17							
1.6	7	.66	.44	.47	.19	-.31	.55	-.38	.19	.14						
1.9	8	.68	.46	.47	.19	-.30	.51	-.39	.19	.15	-.15					
3.0	9	.70	.49	.40	.19	-.28	.49	-.39	.17	.14	-.22	.20				
2.2	10	.71	.51	.44	.19	-.29	.47	-.41	.15	.17	-.24	.22	-.16			
2.0	11	.72	.53	.42	.18	-.29	.53	-.46	.10	.19	-.30	.23	-.16	.17		
3.0	12	.74	.55	.40	.19	-.22	.64	-.44	.11	.19	-.34	.24	-.18	.21	-.26	
3.3	13	.76	.58	.38	.17	-.21	.63	-.57	.09	.20	-.36	.25	-.22	.20	-.52	.39
1.0	14															

N = 62

Table 40 : Means and Standard Deviations for "Non-constant" Variables in M. R. involving Language . Class of 1967

Number	Variable	Mean	S. D.
26	Teacher	.10	.30
27	Teacher	.19	.40
28	Teacher	.27	.45
29	Teacher	.05	.22
30	Teacher	.27	.45
31	Teacher	.02	.13
32	Teacher	.10	.30
42	Phase	3.42	.53
43	Mark	2.98	.84

Table 41 : Significant Steps from Stepwise Multiple Correlation: English marks for Class of 1972 as dependent variable. Multiple correlations, variable names, standardized beta weights and F ratios for each step

Standardized Beta Weights

F Ratio for Step	Step No.	R	R^2	9 Language	21 Conduct	16 Tot. Abs.	11 Arith Cop	8 Spelling	2 Study Me	42 Phase	19 Tot. Dism					
26.0	1	.33	.11	.33												
10.5	2	.39	.15	.30	-.21											
7.1	3	.43	.18	.24	-.18	-.18										
4.4	4	.45	.20	.15	-.17	-.17	.16									
8.4	5	.48	.23	.27	-.15	-.19	.33	-.32								
3.1	6	.49	.24	.24	-.15	-.19	.33	-.34	.12							
2.5	7	.50	.25	.28	-.16	-.18	.34	-.33	.13	-.11						
2.7	8	.51	.26	.27	-.16	-.19	.35	-.32	.11	-.14	.10					
2.2	9															

N = 211

Table 42 : Means and Standard Deviations for "Non-constant" Variables in M. R. involving English . Class of 1972

Number	Variable	Mean	S. D.
22	Teacher	.45	.50
23	Teacher	.08	.27
24	Teacher	.34	.47
25	Teacher	.13	.34
	Teacher		
	Teacher		
42	Phase	3.01	.85
43	Mark	3.11	.70

Table 43 : Significant Steps from Stepwise Multiple Correlation: English marks for Class of 1970 as dependent variable, Multiple correlations, variable names, standardized beta weights and F ratios for each step

Standardized Beta Weights

F Ratio for Step	Step No.	R	R^2	1 School At.	21 Conduct	17 Tot Tard	26 Teacher	10 Lang.St.Sk	28 Teacher	3 Plan &Stm						
20.8	1	.31	.10	.31												
15.9	2	.41	.17	.28	-.27											
9.9	3	.46	.21	.24	-.23	-.21										
7.7	4	.49	.24	.21	-.31	-.22	.20									
5.1	5	.51	.26	.18	-.31	-.21	.18	.15								
8.6	6	.54	.29	.19	-.30	-.22	.22	.20	.19							
1.6	7															

N = 192

Table 44 : Means and Standard Deviations for "Non-constant" Variables in M. R. involving English . Class of 1970

Number	Variable	Mean	S. D.
26	Teacher	.19	.40
27	Teacher	.24	.43
28	Teacher	.20	.40
29	Teacher	.18	.38
30	Teacher	.19	.40
	Teacher		
42	Phase	3.21	.89
43	Mark	2.64	.79

Table 45 : Significant Steps from Stepwise Multiple Correlation: English marks for Class of 1969 as dependent variable. Multiple correlations, variable names, standardized beta weights and F ratios for each step

Standardized Beta Weights

F Ratio for Step	Step No.	R	R^2	1 School At	8 Cor. Exp.	21 Conduct	26 Teacher	29 Teacher	6 Soc.St.Bk	10 Red.So.St.	7 Nat.Sci.Bk					
31.4	1	.37	.14	.37												
18.5	2	.46	.21	.29	.28											
13.1	3	.51	.26	.24	.28	-.23										
5.3	4	.53	.28	.23	.27	-.26	.14									
3.3	5	.54	.30	.22	.27	-.26	.12	-.11								
1.5	6	.55	.30	.23	.35	-.26	.12	-.11	-.11							
2.2	7	.56	.31	.22	.31	-.27	.13	-.10	-.20	.15						
3.8	8	.57	.32	.21	.33	-.27	.12	-.11	-.17	.31	-.22					
1.4	9															

N = 197

Table 46 : Means and Standard Deviations for "Non-constant" Variables in M. R. involving English . Class of 1969

Number	Variable	Mean	S. D.
26	Teacher	.19	.39
27	Teacher	.20	.40
28	Teacher	.17	.38
29	Teacher	.22	.41
30	Teacher	.22	.41
42	Teacher Phase	3.35	.82
43	Mark	2.80	.83

Table 47 : Significant Steps from Stepwise Multiple Correlation: English marks for Class of 1968 as dependent variable, Multiple correlations, variable names, standardized beta weights and F ratios for each step

Standardized Beta Weights

F Ratio for Step	Step No.	R	R^2	42 Phase	34 Teacher	1 School At.	5 Veri.Scor	2 Study Mc.	17 Tot Tard	21 Conduct	28 Teacher	8 Cor. Exp.				
32.1	1	.40	.16	.40												
25.1	2	.52	.27	.41	.33											
18.5	3	.58	.34	.31	.33	.29										
7.4	4	.61	.37	.29	.33	.36	-.18									
9.1	5	.63	.40	.19	.34	.30	-.36	.30								
7.0	6	.65	.43	.17	.35	.26	-.36	.30	-.16							
5.1	7	.67	.44	.15	.39	.23	-.35	.30	-.15	-.15						
3.6	8	.67	.46	.21	.40	.23	-.35	.29	-.14	-.13	.12					
2.7	9	.68	.46	.16	.41	.23	-.35	.27	-.10	-.14	.14	.12				
2.2	10															

N = 172

Table 48 : Means and Standard Deviations for "Non-constant" Variables in M. R. involving English . Class of 1968

Number	Variable	Mean	S. D.
28	Teacher	.04	.20
31	Teacher	.20	.40
32	Teacher	.22	.41
33	Teacher	.19	.39
34	Teacher	.29	.46
35	Teacher	.06	.24
42	Phase	3.51	.79
43	Mark	2.84	.79

Table 49 : Significant Steps from Stepwise Multiple Correlation: English marks for Class of 1967 as dependent variable. Multiple correlations, variable names, standardized beta weights and F ratios for each step

Standardized Beta Weights

F Ratio for Step	Step No.	R	R^2	1 School At	34 Teacher	16 Tot Absc	2 Study Mc.	5 Veri. Scor	32 Teacher	35 Teacher	21 Conduct	17 Tot Tard	8 Corr. Exp	14 Sour. Use		
32.4	1	.40	.16	.40												
25.0	2	.52	.27	.37	.33											
20.9	3	.59	.35	.31	.34	-.29										
5.4	4	.61	.37	.24	.35	-.28	.16									
7.9	5	.63	.40	.22	.36	-.27	.27	-.20								
7.2	6	.65	.43	.18	.32	-.26	.29	-.22	-.17							
3.1	7	.66	.44	.18	.34	-.25	.28	-.22	-.15	.11						
2.2	8	.67	.45	.16	.38	-.26	.28	-.21	-.14	.10	-.09					
.8	9	.67	.45	.16	.38	-.24	.27	-.21	-.13	.10	-.09	-.06				
.6	10	.67	.45	.16	.38	-.23	.26	-.21	-.13	.11	-.09	-.06	.05			
3.6	11	.68	.46	.16	.40	-.23	.28	-.22	-.12	.10	-.11	-.07	.26	-.24		
.8	12															

N = 170

Table 50 : Means and Standard Deviations for "Non-constant" Variables in M. R. involving English . Class of 1967

Number	Variable	Mean	S. D.
31	Teacher	.26	.44
32	Teacher	.21	.41
33	Teacher	.22	.41
34	Teacher	.24	.43
35	Teacher	.08	.27
42	Teacher Phase	3.19	.88
43	Mark	2.84	.77

Table 51 : Significant Steps from Stepwise Multiple Correlation: Science marks for Class of 1972 as dependent variable. Multiple correlations, variable names, standardized beta weights and F ratios for each step

Standardized Beta Weights

F Ratio for Step	Step No.	R	R^2	22 Teacher	9 Language	21 Conduct	11 Arith Cp.	1 School At	5 Veri Scor	2 Study Mc						
35.5	1	.38	.15	.38												
41.5	2	.54	.29	.41	.38											
21.8	3	.60	.36	.46	.34	-.27										
9.6	4	.62	.39	.49	.21	-.27	.21									
7.8	5	.64	.41	.49	.17	-.26	.20	.16								
3.9	6	.65	.42	.48	.17	-.25	.19	.28	-.16							
4.7	7	.66	.43	.49	.12	-.24	.21	.18	-.30	.27						
.9	8															

N = 210

Table 52 : Means and Standard Deviations for "Non-constant" Variables in M. R. involving Science . Class of 1972

Number	Variable	Mean	S. D.
22	Teacher	.47	.50
23	Teacher	.53	.50
	Teacher		
	Teacher		
	Teacher		
	Teacher		
42	Phase	3.09	.80
43	Mark	3.21	.71

Table 53 : Significant Steps from Stepwise Multiple Correlation: Science marks for Class of 1971 as dependent variable. Multiple correlations, variable names, standardized beta weights and F ratios for each step

Standardized Beta Weights

F Ratio for Step	Step No.	R	R^2	21 Conduct	42 Phase	7 Reading	6 Wd Know.									
83.4	1	.52	.27	-.52												
43.2	2	.62	.39	-.46	.35											
2.3	3	.63	.39	-.45	.33	.08										
5.3	4	.64	.41	-.45	.34	.42	-.36									
1.7	5															

N = 227

Table 54 : Means and Standard Deviations for "Non-constant" Variables in M. R. involving Science . Class of 1971

Number	Variable	Mean	S. D.
24	Teacher	.48	.50
25	Teacher	.52	.50
	Teacher		
	Teacher		
	Teacher		
	Teacher		
42	Phase	3.15	.73
43	Mark	3.78	.48

Table 55 : Significant Steps from Stepwise Multiple Correlation: Science marks for Class of 1970 as dependent variable. Multiple correlations, variable names, standardized beta weights and F ratios for each step

Standardized Beta Weights

F Ratio for Step	Step No.	R	R^2	21 Conduct	26 Teacher	11 Rd.Nt.Sci	1 School At	27 Teacher								
35.1	1	.45	.20	-.45												
11.9	2	.52	.27	-.43	.25											
8.6	3	.56	.31	-.41	.25	.21										
5.8	4	.58	.34	-.37	.26	.18	.18									
7.0	5	.61	.37	-.33	.08	.21	.22	-.27								
2.4	6															

N = 140

Table 56 : Means and Standard Deviations for "Non-constant" Variables in M. R. involving Science . Class of 1970

Number	Variable	Mean	S. D.
26	Teacher	.61	.49
27	Teacher	.23	.42
28	Teacher	.06	.23
29	Teacher	.10	.30
	Teacher		
	Teacher		
42	Phase	3.27	.77
43	Mark	2.76	.79

Table 57 : Significant Steps from Stepwise Multiple Correlation: Science marks for Class of 1969 as dependent variable. Multiple correlations, variable names, standardized beta weights and F ratios for each step

Standardized Beta Weights

F Ratio for Step	Step No.	R	R^2	9 Quan Tk.	27 Teacher	21 Conduct	2 Study Mc	16 Tot Abs.	26 Teacher	11 Rd Nt.Sci	12 Read Lit					
29.4	1	.45	.20	.45												
16.6	2	.55	.30	.47	-.32											
13.8	3	.61	.38	.43	-.30	-.28										
7.9	4	.65	.42	.36	-.31	-.24	.22									
6.7	5	.67	.45	.30	-.35	-.24	.22	-.19								
10.8	6	.71	.50	.31	-.29	-.26	.26	-.33	.28							
3.3	7	.72	.51	.15	-.31	-.25	.24	-.32	.29	.21						
4.3	8	.73	.53	.22	-.30	-.24	.24	-.32	.27	.39	-.28					
2.3	9															

N = 119

Table 58 : Means and Standard Deviations for "Non-constant" Variables in M. R. involving Science . Class of 1969

Number	Variable	Mean	S. D.
26	Teacher	.08	.27
27	Teacher	.59	.49
28	Teacher	.16	.37
29	Teacher	.03	.18
30	Teacher	.02	.13
31	Teacher	.13	.33
42	Phase	3.43	.73
43	Mark	2.61	.98

Table 59 : Significant Steps from Stepwise Multiple Correlation: Science marks for Class of 1968 as dependent variable. Multiple correlations, variable names, standardized beta weights and F ratios for each step

Standardized Beta Weights

F Ratio for Step	Step No.	R	R^2	1 School At	16 Tot. Absc	5 Veri Scor	2 Study Mc	21 Conduct	32 Teacher							
37.6	1	.49	.24	.49												
10.3	2	.55	.30	.45	-.25											
6.7	3	.58	.34	.52	-.25	-.21										
6.6	4	.61	.37	.44	-.22	-.36	.28									
1.6	5	.62	.38	.43	-.23	-.35	.26	-.09								
2.6	6	.63	.39	.44	-.23	-.35	.25	-.12	.12							
.9	7															

N = 122

Table 60: Means and Standard Deviations for "Non-constant" Variables in M. R. involving Science . Class of 1968

Number	Variable	Mean	S. D.
26	Teacher	.13	.34
27	Teacher	.03	.18
30	Teacher	.26	.44
31	Teacher	.57	.50
32	Teacher	.01	.09
42	Teacher Phase	3.55	.67
43	Mark	3.11	.91

Table 61 : Significant Steps from Stepwise Multiple Correlation: Science marks for Class of 1967 as dependent variable. Multiple correlations, variable names, standardized beta weights and F ratios for each step

Standardized Beta Weights

F Ratio for Step	Step No.	R	R^2	2 Study Mc	16 Tot. Absc	1 School At	9 Quan. Tk.	7 Nt.Sci Bk	29 Teacher	27 Teacher						
19.01	1	.40	.16	.40												
6.92	2	.47	.22	.37	-.24											
4.23	3	.50	.25	.28	-.23	.20										
2.94	4	.52	.28	.24	-.18	.18	.17									
6.05	5	.57	.32	.23	-.23	.18	.35	-.29								
3.46	6	.59	.34	.25	-.26	.14	.36	-.28	.17							
2.77	7	.60	.36	.24	-.29	.15	.37	-.30	.17	.14						
2.08	8															

N = 99

Table 62 : Means and Standard Deviations for "Non-constant" Variables in M. R. involving Science . Class of 1967

Number	Variable	Mean	S. D.
26	Teacher	.07	.26
27	Teacher	.04	.20
29	Teacher	.02	.14
30	Teacher	.76	.43
31	Teacher	.10	.30
32	Teacher	.01	.10
42	Phase	3.61	.73
43	Mark	3.02	.89

Table 63 : Significant Steps from Stepwise Multiple Correlation: Math marks for Class of 1972 as dependent variable. Multiple correlations, variable names, standardized beta weights and F ratios for each step

Standardized Beta Weights

F Ratio for Step	Step No.	R	R^2	9 Language	42 Phase	21 Conduct	22 Teacher	16 Tot. Abs.	1 School At	19 Tot. Dism						
63.4	1	.49	.24	.49												
10.7	2	.53	.28	.40	.22											
7.3	3	.55	.31	.36	.19	-.17										
6.4	4	.57	.33	.35	.19	-.16	.15									
6.1	5	.59	.35	.30	.20	-.15	.15	-.15								
4.8	6	.60	.36	.26	.20	-.15	.16	-.14	.13							
2.2	7															

N = 200

Table 64 : Means and Standard Deviations for "Non-constant" Variables in M. R. involving Math . Class of 1972

Number	Variable	Mean	S. D.
22	Teacher	.49	.50
23	Teacher	.26	.44
24	Teacher	.25	.44
	Teacher		
	Teacher		
	Teacher		
42	Phase	3.03	.70
43	Mark	2.53	1.01

Table 65 : Significant Steps from Stepwise Multiple Correlation: Math marks for Class of 1971 as dependent variable. Multiple correlations, variable names, standardized beta weights and F ratios for each step

Standardized Beta Weights

F Ratio for Step	Step No.	R	R^2	21 Conduct	42 Phase	22 Teacher	2 Study Mc	16 Tot Absc	24 Teacher	14 Soc.St.Sk.	7 Reading	11 Arith Cp.	8 Spelling			
54.8	1	.44	.20	-.44												
37.1	2	.56	.31	-.35	.35											
10.4	3	.58	.34	-.34	.41	.18										
9.4	4	.61	.37	-.34	.35	.18	.17									
7.0	5	.62	.39	-.34	.33	.18	.16	-.14								
3.5	6	.63	.40	-.30	.34	.16	.16	-.16	-.11							
1.4	7	.63	.40	-.29	.32	.16	.15	-.15	-.11	.07						
5.8	8	.65	.42	-.30	.31	.17	.15	-.15	-.10	.23	-.20					
8.1	9	.66	.44	-.29	.30	.19	.14	-.16	-.11	.11	-.44	.38				
2.6	10	.67	.45	-.29	.29	.19	.13	-.16	-.11	.11	-.34	.50	-.23			
2.1	11															

N = 226

Table 66 : Means and Standard Deviations for "Non-constant" Variables in M. R. involving Math . Class of 1971

Number	Variable	Mean	S. D.
22	Teacher	.08	.27
23	Teacher	.17	.38
24	Teacher	.24	.43
25	Teacher	.50	.50
	Teacher		
	Teacher		
42	Phase	2.98	.97
43	Mark	2.49	1.02

Table 67 : Significant Steps from Stepwise Multiple Correlation: __________________ marks for Class of 1970 as dependent variable. Multiple correlations, variable names, standardized beta weights and F ratios for each step

Standardized Beta Weights

F Ratio for Step	Step No.	R	R^2	9 Quan. Tk.	30 Teacher	1 School At	27 Teacher	21 Conduct	8 Corr. Exp	13 Gen Voc.	19 Tot. Dism	14 Sour. Use	10 Red So.St			
22.6	1	.34	.12	.34												
16.0	2	.44	.19	.46	.30											
6.6	3	.47	.22	.42	.32	.18										
5.0	4	.49	.24	.40	.35	.18	.16									
5.6	5	.52	.27	.39	.37	.15	.22	-.17								
3.3	6	.53	.28	.30	.40	.12	.21	-.17	.17							
5.1	7	.55	.30	.40	.38	.11	.21	-.19	.28	-.25						
3.1	8	.56	.32	.42	.38	.12	.21	-.19	.28	-.26	-.11					
2.8	9	.57	.33	.38	.40	.10	.20	-.18	.20	-.33	-.12	.22				
1.7	10															

N = 174

Table 68 : Means and Standard Deviations for "Non-constant" Variables in M. R. involving Math. Class of 1970

Number	Variable	Mean	S. D.
26	Teacher	.14	.35
27	Teacher	.25	.43
28	Teacher	.30	.46
29	Teacher	.18	.39
30	Teacher	.13	.33
	Teacher		
	Teacher		
42	Phase	3.19	.95
43	Mark	2.78	.83

Table 69 : Significant Steps from Stepwise Multiple Correlation: Math marks for Class of 1969 as dependent variable. Multiple correlations, variable names, standardized beta weights and F ratios for each step

Standardized Beta Weights

F Ratio for Step	Step No.	R	R^2	8 Corr. Exp	21 Conduct	16 Tot Absc	17 Tot Tard	29 Teacher	3 Plan & St.	28 Teacher	26 Teacher					
40.2	1	.43	.18	.43												
16.3	2	.50	.25	.42	-.26											
15.1	3	.56	.31	.35	-.26	-.25										
6.8	4	.58	.33	.35	-.25	-.22	-.16									
6.1	5	.60	.36	.30	-.31	-.20	-.16	-.17								
2.5	6	.60	.36	.29	-.31	-.20	-.15	-.16	.10							
3.1	7	.61	.38	.31	-.36	-.20	-.14	-.20	.11	-.12						
2.8	8	.62	.39	.28	-.38	-.20	-.14	-.24	.11	-.14	-.11					
1.4	9															

N = 183

Table 70 : Means and Standard Deviations for "Non-constant" Variables in M. R. involving Math . Class of 1969

Number	Variable	Mean	S. D.
26	Teacher	.06	.24
27	Teacher	.14	.35
28	Teacher	.10	.31
29	Teacher	.31	.46
31	Teacher	.35	.48
32	Teacher	.03	.18
42	Teacher Phase	3.31	.89
43	Mark	2.85	.84

Table 71 : Significant Steps from Stepwise Multiple Correlation: Math marks for Class of 1968 as dependent variable. Multiple correlations, variable names, standardized beta weights and F ratios for each step

Standardized Beta Weights

F Ratio for Step	Step No.	R	R^2	26 Teacher	1 School At	5 Veri.Scor	32 Teacher	16 Tot.Absc.	27 Teacher							
16.9	1	.32	.10	.32												
10.0	2	.40	.16	.27	.25											
6.7	3	.45	.20	.27	.33	-.21										
3.4	4	.47	.22	.27	.34	-.20	.14									
6.7	5	.50	.25	.24	.32	-.21	.20	-.21								
2.4	6	.52	.27	.27	.33	-.19	.22	-.22	.12							
1.4	7															

N = 147

Table 72 : Means and Standard Deviations for "Non-constant" Variables in M. R. involving Math . Class of 1968

Number	Variable	Mean	S. D.
26	Teacher	.21	.41
27	Teacher	.21	.41
28	Teacher	.27	.45
29	Teacher	.09	.28
31	Teacher	.21	.41
32	Teacher	.01	.08
42	Teacher Phase	3.61	.88
43	Mark	2.84	.87

Table 73 : Significant Steps from Stepwise Multiple Correlation: Math marks for Class of 1967 as dependent variable. Multiple correlations, variable names, standardized beta weights and F ratios for each step

Standardized Beta Weights

F Ratio for Step	Step No.	R	R^2	1 School At	8 Corr. Exp	2 Study Mc	33 Teacher	31 Teacher								
20.8	1	.42	.18	.42												
11.4	2	.52	.27	.37	.30											
4.9	3	.55	.30	.30	.26	.21										
5.0	4	.58	.34	.30	.28	.25	.20									
3.1	5	.60	.36	.26	.29	.27	.19	-.15								
1.5	6															

N = 98

Table 74 : Means and Standard Deviations for "Non-constant" Variables in M. R. involving Math . Class of 1967

Number	Variable	Mean	S. D.
26	Teacher	.64	.48
27	Teacher	.17	.38
29	Teacher	.09	.29
31	Teacher	.08	.28
33	Teacher	.01	.10
42	Teacher Phase	3.64	.97
43	Mark	2.58	.79

TABLE 75: 1968 English Correlation Matrix

	1	2	3	5	6	7	8	9	10	11	12	13	14	16	17	18	19	21	28	31	32	33	34	35	42	43
1		.54	.65	.36	.22	.12	.28	.28	.20	.23	.25	.23	.27	-.25	-.26	.09	.05	-.28	-.06	.08	-.06	.03	-.03	.02	.36	.39
2	C_S		.62	.67	.29	.21	.31	.33	.30	.31	.30	.23	.34	-.24	-.16	.09	.02	-.22	-.06	.11	.02	.02	-.10	-.03	.39	.26
3		M_S		.40	.05	.12	.16	.14	.18	.20	.20	.10	.22	-.23	-.22	.08	.01	-.19	.05	.04	-.05	.00	-.05	.07	.24	.31
5					.07	.10	.10	.07	.09	.12	.08	.05	.10	-.06	-.08	-.01	.06	-.09	.04	.04	.03	.00	-.04	-.06	.01	-.06
6	I	Soc. Studies				.64	.69	.78	.68	.65	.66	.80	.72	-.39	-.27	.04	-.12	-.16	-.24	.08	.11	.12	-.07	-.19	.56	.24
7	T	Nat. Science					.57	.62	.86	.67	.66	.70	.56	-.46	-.41	-.07	-.17	-.14	-.08	.02	.04	.05	-.01	-.11	.29	.15
8	E	Correct Express.						.77	.67	.67	.69	.78	.88	-.41	-.41	-.02	-.08	-.10	-.28	.10	.16	.03	-.06	-.13	.53	.31
9	D	Quant. Thinking							.73	.71	.68	.81	.77	-.43	-.43	-.05	-.12	-.17	-.22	.15	.11	.07	-.08	-.21	.53	.29
10		Reading Social Studies								.76	.77	.73	.67	-.38	-.42	-.07	-.13	-.17	-.17	.03	.07	.05	.01	-.14	.48	.28
11		Reading Nat. Science									.92	.70	.65	-.41	-.47	-.12	-.13	-.14	-.18	-.05	.13	.08	-.01	-.11	.41	.27
12		Reading Literature										.73	.64	-.42	-.46	-.07	-.12	-.17	-.22	-.19	.14	.08	-.02	-.11	.46	.31
13		General Vocabulary											.77	-.43	-.42	-.03	-.13	-.12	-.23	.07	.12	.09	-.06	-.18	.47	.25
14		Sources												-.43	-.40	.00	-.10	-.10	-.30	.10	.16	.05	-.07	-.15	.55	.28
16									Absences						.61	.01	.39	.12	-.02	-.12	-.10	-.01	.16	.10	-.34	-.24
17									Tardy							.23	.27	.15	-.05	-.04	.00	-.04	.03	.11	-.21	-.28
18									Suspended								.00	-.02	-.02	.05	.17	-.07	-.09	-.07	.03	-.07
19									Dismissed									-.01	-.17	.18	-.04	-.07	.00	.03	-.07	-.09
21									Conduct										-.07	-.20	.11	-.18	.32	-.11	-.24	-.18
28																				-.10	-.11	-.10	-.13	-.05	-.36	-.03
31																					-.26	-.24	-.32	-.13	.05	-.03
32																						-.26	-.34	-.14	.14	-.16
33													Teachers				--						-.31	-.13	.14	-.16
34																								-.17	-.04	.31
35																									-.08	-.04
42																					Phase					.40
43																					Mark					

CHAPTER VIII. STUDENT CASE STUDIES

Methodology

In order to investigate changes which occur over time, a longitudinal case study approach was employed during the second year of the evaluation. Two samples of forty-eight students each were studied to ascertain how they viewed their school and education, and to determine if their individual perceptions indicated that the Amherst system was consistent with its declared objectives.

The first sample was interviewed in depth from September, 1967 through June, 1968. All members of this sample were interviewed a minimum of six times, with most interviews conducted at marking period transition dates. Case studies were prepared on the basis of student comments, augmented by conversations with teachers and other professional staff members. Each member of the second sample, selected for purposes of data verification, was interviewed once in May, 1968. Each sample represented 4% of the total population, and was comprised of students randomly selected from blocks stratified on the basis of year in school, sex, English phase, and father's socio-economic status.

Table 1 shows the English class phase position of all high school students, cross-classified by socio-economic status (SES) which was determined from the fathers' occupation. There were no pupils in phase 1 in English. The criteria for classification of SES categories was reported in

Sup[illegible]'s Psychology of Careers:[1]

SES Categories

1. Professional and managerial, higher
2. Professional and managerial, regular
3. Semi-professional and managerial, lower
4. Skilled
5. Semi-skilled
6. Unskilled

Source of the data used by the evaluation staff to determine SES was the students' permanent records, wherein is listed the father's occupation. This record is kept current by the guidance counselors. Accuracy of the occupational titles was verified in the initial interview.

Table 1: Percentages and numbers of English students, grades 9-12, classified by phase and socio-economic status.

SES Categories

Phase	Categories 1 & 2		Category 3		Categories 4 - 6		Totals
	N	%	N	%	N	%	N
V	33	9.7	8	3.8	4	1.3	45
IV	176	51.6	67	32.3	42	13.7	285
III	120	35.1	106	51.2	152	49.6	378
II	12	3.5	26	12.5	108	35.2	146
Total	341		207		306		854

If there was no relationship between phase and SES, the 45 phase V students should be distributed in the same proportions as are the SES totals at the bottom of the table. Looked at in another way, the 341 high SES students should be distributed proportionally according to the phase totals along the right side of Table 1. These expected frequencies and their percentages have been calculated and appear in Table 2.

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[1] Super, Donald E., The Psychology of Careers, A Scheme for Classifying Occupations by Levels, Field, and Enterprise, Harper & Brothers, New York, 1957, p. 48.

Table 2. Expected frequencies of English students, grades 9-12, classified by phase and socio-economic status, assuming interdependence of these two variables.

SES Categories

Phase	High 1 & 2		Middle 3		Low 4 - 6		Totals
	N	%	N	%	N	%	
V	18	5.3	11	5.3	16	5.2	45
IV	114	33.4	68	32.8	102	33.3	285
III	151	44.3	92	44.4	136	44.4	378
II	58	17.0	36	17.4	52	17.0	146
Total	341		207		306		854

Comparison of Tables 1 and 2 shows large discrepancies between actual and expected frequencies. For example, 17% (N-52) of the 306 low SES students would be expected to fall in phase II, but there are actually 108 students, twice as many as would be expected. Of the high SES students, only one-fifth as many as expected are in phase II.

A chi-square computation indicates that these discrepancies are much larger (.01 level of confidence) than could be attributed to chance alone. Hence, socio-economic status, or correlates of it, appear to be strongly related to phase placement.

Case Study Data Collection

A series of fifteen data sheets (located in Appendix) were developed and used in the collection of material for the case studies. The data sheets maintained consistency in information gathering for all students. The data collection guides used by the interviewers included: Parental Data, Social Activities, Warning, Disciplinary Action, Classroom Performance, Grade Cards, Honor Roll, Testing Out, Phase or Course Change, Independent Study, Next Year's Course Selections, and Homework. Attendance data was obtained from official school records, and reported grades were confirmed in this manner.

Interview Procedures

Three advanced graduate students served as interviewers. Conferences were conducted in private offices in the senior high school teachers' planning rooms, or in an isolated special service room in the junior high school. Students, scheduled for interviews only during their free periods, were assured the anonymity of their responses and the interviewers attempted to effect friendly and comfortable relationships with each participant in the study. Parental permission was requested in an explanatory letter.

Interviewers used the data sheets as guides in collecting information. In order to elicit more comprehensive attitudinal information, students were encouraged to explain their responses. The essential value of the interviewing technique was deemed to be response clarification and the explanation of motivation. Interviewers were charged with the responsibility of getting to know each member of his own sample as comprehensively as possible.

Interviewers

The interviewers were two males and one female, graduate students of guidance and counseling at the University of Massachusetts. All were trained in specific interview techniques and became thoroughly familiar with the information being sought. They were also trained in case study procedures.

Additional Resource Personnel

As additional sources of information, the interviewers contacted teachers and counselors of sample members for any necessary amplification of obtained data.

School Records

Records were made fully available by the Guidance Office so that information concerning previous school performance, standardized test results, and teachers' comments might be included in the case studies.

Information concerning health which could have been verified was not, as the school nurse reported only height and weight of sample members.

Homework Samples

Participants were required to bring samples of their homework on designated days. This homework was reproduced to make further comparisons of the nature of homework in different phases.

Confidentiality

Confidentiality of information was maintained at all times. To this end, the project secretary identified final copies of the case studies by code names. These were obtained from a list of names in a standard dictionary. It is still important to note that the written case studies are personal information, and were prepared to benefit the school in understanding its impact or lack of impact on individual students. The case studies were not prepared for wide distribution.

Case Study Summaries

The following summaries of the case studies are presented in order of highest year in school; highest phase; and alphabetically by code names. Complete studies may be found in the Appendix.

Phase V
12th year

ALICE

Alice, highly poised, personable, perceptive, and of above average ability according to standardized tests, is successfully completing her high school education. She has been accepted by the college of her choice. She has apparently utilized the phase program as it was meant to be used, having advanced from middle phases (III & IV) as a sophomore to upper phases (IV & V) as a senior. Further utilization may be found in her engagement of independent study projects.

Alice has currently nebulous vocational goals, expressed by her "I want to do something unusual," but she definitely plans on a college education. She would appear to have benefitted from the ungraded program in that she was free to exercise initiative to accept responsibility for self-direction. Amherst appears to have facilitated her educational, social, and judgemental maturation and she, in turn, reflects credit on the system.

Phase IV, V
12th year

KURT

With a professor father and an older brother a college student, Kurt comes from an academically oriented family. In phases IV and V, his achievement is suffering somewhat in this, his year of graduation, perhaps as a result of excessive extracurricular activities. Despite his senior year slump, Kurt will attend college, and it is estimated, will succeed, as his grade record to date has been A's and B's. Kurt is dissatisfied with the phase system to the extent that "there is too much difference between phase

IV and phase V work." The interviewer received the impression that Kurt needed a greater challenge than was available at Amherst this year. It appears, however, that the ungraded system has proven viable for Kurt and his academic needs as it has afforded him the opportunity to adjust his own program. It has proven successful at least until this year.

Phase IV, V
12th year

RITA

Rita is a better than average student in her senior year at Amherst. It appears that she has taken advantage of the opportunities available to her in the ungraded system. She has been able to more fully pursue her interests in subjects that appeal to her by selecting less demanding phase levels for subjects that do not. Rita's educational plans include college, which seems attainable. Her vocational plans include the possibility of professional writing or drama, although she tends to settle on teaching as a realistic goal. She is not fully confident of becoming adequately proficient in writing or drama. One must estimate that her goals are certainly attainable, and that she has fully utilized the Amherst system.

Phase IV
12th year

FRED

Fred, a personable, obviously capable young man, appears to have used the Amherst system most effectively in order to achieve a relatively meritorious record in secondary school. The interviewer estimates that Fred will continue to enjoy a certain measure of school success, particularly if he is challenged externally to produce more than the minimal requirements.

Fred was able to chose those levels most challenging to him, yet generally commensurate with his ability. He has evaluated himself as capable of higher phase effort in several courses and has successfully demanded more of himself in those courses. His record enables him to achieve his goal of admission to a university. The interviewer estimates that Fred will continue to enjoy a certain measure of school success, particularly if he is challenged externally to produce more than the minimal requirements.

Phase III, IV
12th year

JAY

Jay was an ideal subject for this evaluation. He had been in the phase program since its inception and apparently used it to meet his needs. It appeared that he tended to choose below his ability level for easier educational demands until he needed to raise his phases to insure college entry. Jay seems to have used the system rather than to have been molded by it.

Phase III
12th year

FAYE

Interviews revealed Faye to be a willing subject although questioning was usually required to elicit her participation. She seemed disinterested without being hostile. "Disinterested" also seems to describe her recent school history. If this quality existed prior to the 9th grade, it could not be ascertained from limited records available.

Faye's goals appear to be modest and relatively easy to attain, considering her apparent ability; however, her motivation seems to be limited. The phase system may have allowed Faye to follow an unchallenging path despite some indications that she could have achieved at a higher level.

Phase III
12th year

HELEN

Helen is an unusual high school student as she was married a month prior to graduation. A work-study student in a business education program, she was in some danger of failing to graduate because of generally poor achievement. Following her marriage, she appeared motivated to assume extra work in order that she might earn a diploma. She was a relatively poor participant in the study for lack of interest and some apparent hostility for adults. With a history of hostile dealings with authority figures, the Amherst system has apparently helped her somewhat in that she was able to choose her own level of effort. Helen is largely undecided on her future activities; her counselor estimates she will succeed at her marriage, as he feels she is a very determined person who has handled some very difficult emotional problems well. With only a history of several short term positions as part of her work-study program, her vocational future is rather more difficult to assess as her aims are too undefined in this area.

Phase II, III
12th year

WARD

Ward is a senior who has yet to make a decision for the immediate future. At the beginning of the study, he thought of a possible post graduate year and, also, of entering the Marines. He definitely ruled out college as being unnecessary for a job. During the second half of the year, though, he has commenced considering college as a possibility. He would still need a post graduate year, however, to make up a mathematics deficiency. Scoring above average in standardized tests, Ward could achieve well in higher phases, but, lacking self-confidence, elected phases II and III because he wouldn't have to work too hard. This is one apparent fault of the ungraded system; if the challenge of the system is too great for the degree of self-confidence, there is a tendency for the student to take the easier phase. This seems to bespeak a need for more intensive counseling, at least for selected students.

Phase II
7th year

OLIN

A very immature 7th year student, Olin is at the phase II level and has earned largely A's and B's. Previously, his grades tended to vary all through the spectrum. He has no plans either for high school or beyond. His vocational aspirations call currently for him to become an electrician. He appears to have received no planning aid from home or from school. His standardized test scores would indicate that he is not achieving at a level commensurate with his indicated ability. Olin may best be described as a struggling "little boy." It is hoped, but impossible to be estimated, that growth will bring a desirable adjustment to school. At this moment, the Amherst system is simply too unstructured for Olin.

Phase II
7th year

ABBY

Abby, limited according to the evidence of 7th year standardized test results and grade achievement, has improved somewhat with her entry into the phased junior high school. Phasing has removed her from competition with the "brighter" students. Success at a level commensurate with her ability seems to be an enriching experience for Abby. For the first time she is earning A's and B's. She has confessed a greater enjoyment of school now that she can work at her "own ability." It would appear that the ungraded system is beneficial to Abby, which could have ultimate social and intellectual benefits for her as well.

Phase IV & V
11th year

EMMA

Emma was an excellent participant in the evaluation project. It may seem that she is a good citizen of her school and her community. She appears to relate well with her family, peers, and faculty. It would appear that she will benefit from the ungraded phase system of Amherst. She seems aware of her abilities and her opportunities; and seems equally determined to make the most of both. Because of her high standardized test scores, her continuous good scholarship and social behavior, Emma will be able to realize her goals for a college education and for a career as a recreation teacher. She would appear to owe much to her family which encourages her in her ambitions and her endeavors. It would appear that aptitude, ability and the school environment are all in Emma's favor.

Phase III, IV, V
11th year

VANCE

Vance was a pleasant and intelligent participant. Currently an upper phase (IV & V) student, he has a history of excellent achievement, both at Amherst and at the parochial school he formerly attended.

His vocational goals are currently unsettled, although he indicated a preference for college, followed by professional school in engineering, medicine, or oceanography.

Vance has apparently accepted the ungraded school as a challenge. He is involved in independent study at high phase levels in courses of interest.

Phase IV
11th year

KAREN

Karen, who scored high on standardized tests, is achieving A's and B's at the phase IV level. She has very firm ideas that school is valuable and she plans on either Rhode Island School of Design, or a teacher's college. Art is currently a passion of hers, but she acknowledges the possibility of elementary teaching as a career. Her parents urge her to succeed and evidence keen interest in her activities. She likes school for its own sake as well as for the social values it also affords. She is moving and will not graduate from Amherst, but she is a girl who will succeed in any system. Amherst merely offered her greater opportunity for self-direction than she could find in a traditional school.

Phase IV
11th year

VERA

An achieving student with a serious outlook, Vera has clear and definite ideas of going to college to become a physical therapist. She seeks advice from her parents and teachers but allegedly makes her own phase decisions. Although doing excellent work in the sciences, Vera finds her linguistic abilities less formidable. The phase program has provided her with the opportunity to understand her limitations and adjust to them. It has also enabled her to select her own educational direction and facilitated her following the path she has chosen.

Phase III
11th year

PETER

Peter is a high school junior, phase III, with college educated parents. He seems rather easy going and not particularly competitive. Although following a pre-college program, Peter is not sure whether he is interested in college or in a technical school. Although above average on standardized test scores, Peter is not achieving at a comparable level. There is an air of unrealism in his tentative plans for higher education, as he seems unaware that his record would restrict him. Peter chose his phase levels without help from either parents or counselor, and he based his choice on his grades. He has discovered that he likes school, when he can select levels where he can achieve. If he continues his present achievement, he may find it difficult to enter into higher education. It would appear that intensive counseling would be of value to Peter, in order to facilitate his gaining something of value from high school. The Amherst system seems to be allowing him to "drift."

Phase III
11th year

TED

Above average in standardized test scores, Ted is achieving B's and C's at the phase III level in a pre-college program. His current plans call for college attendance, which are probably attainable. Ted seems to have chosen college not through any strong personal commitment, but through a feeling that it is the thing to do. He appears to do what is expected of him and no more. Ted has made his own phase selections, considering himself to be average. It is believed that if a counselor or teacher suggested a phase change, he would probably acquiesce. The interviewer feels that, because he is so "average" Ted has been overlooked to some extent, and that intensified counseling might be in order for him to make better use of the Amherst system.

Phase II
11th year

JAN

The ungraded system at Amherst has given Jan an opportunity to achieve some success in school. She does not particularly enjoy her school experience but she does not exhibit any feeling of inferiority for being in phase II course levels. She seems to derive much satisfaction from individual attention and could probably benefit from considerably more than she now receives. Jan has no well-formed vocational goals and will probably need help in finding satisfying work when school is finished. She will have few marketable skills and her weight problem would seem to preclude all but the less strenuous positions. She seems immature in her interests and lacking in ambition. It is estimated that if the Amherst system continues to provide her with rewarding experiences and can assist her to a vocational decision, she may well adjust successfully to the world of work.

Phase IV, V
10th year

CLARK

Clark is a sophomore for whom it may be predicted the Amherst system will prove valuable. He appears responsible beyond his years, making all his own phase (IV and V) choices, although he does discuss them with his parents. His grade record of A's and B's is consistent with high scores on standardized tests. Clark is pursuing a pre-college program and his plans for the future include college. It may be estimated that the Amherst system will offer Clark sufficient challenge that he may achieve well and learn more than might be expected of a traditional system. It would appear that Clark has the intellectual equipment for success, and that he also has a sense of responsibility adequate to the task. One might say he is a "natural" for the ungraded program.

Phase IV, V
10th year

PATSY

With professional parents, high standardized test scores, social maturity, Patsy is a phase IV and V sophomore who is earning A's and B's with such consistency that a lapse of any sort seems inconceivable. Gregarious, she engages in numerous extracurricular activities. Her plans presently include entering college, but go no farther. She is naturally confident of achieving her goals as they stand currently. As her parents trust her judgment, all her phase choices are her own, although she does advise her parents of her actions. Patsy is an intelligent and mature young lady, and the Amherst ungraded system seems tailored for her. There is no reason for anticipating anything other than success for her.

Phase IV
10th year

DICK

Dick is, and has been an above average student. He varies his activities between intellectual and athletic pursuits. He was a willing and perceptive participant in the evaluation study, offering pertinent information. He indicated that he is under relatively strong parental pressures to excel in academic performance. His diffident air could indicate doubts of his ability to measure up to the family record and/or unwillingness to follow the course that his parents seemingly are charting for him. There are some indications of his refusal to perform maximally in order that he might conform to his peer's norms. It is estimated that the Amherst system will enable him to fulfill his capacities, particularly under his parent's direction. The possibility of incipient rebellion on Dick's part seems to indicate that he could benefit from more counseling than is the normal lot of the "good" student. Should he fit the mold that has apparently been cast for him, he should succeed through high school and college.

Phase IV
10th year

DALE

Dale would appear to be a somewhat reserved, intelligent, and determined girl. Her record impressed the interviewer, as it has those in the Amherst system, as a very good one. It seems probable that she will achieve her goals of completing high school successfully and entering the University of Massachusetts. It is estimated that vocational direction will come as a product of further education and maturity; Dale apparently has sufficient potential to "make it" in any one of a number of fields. She has used the Amherst system to advantage, and will probably continue such usage. It is believed she could perhaps achieve successfully at a higher phase level, but Dale cannot see any need for the added responsibility such level would require.

Phase III, IV
10th year

MARK

Mark's impressions may be tainted because of a possibility of "Hawthorne effect," inadvertently generated by the interviewer in order to overcome initial hostility on Mark's part. With college educated parents, school achievement well above what might be expected on the basis of standardized test scores, and a feeling that college is a "must," it is estimated that Mark will achieve sufficiently well in the Amherst system to enter a college. He has no particular vocational goals at this time, nor has he any academic major in mind. He believes his phase choices to be his own, although he did confer with parents, counselor, and friends prior to making his choices. He intends up-phasing next year to better insure college entrance. Mark seems to be progressing at his own rate, thanks to the ungraded system. It is estimated that the Amherst system will serve him in good stead, and that he will continue to achieve at a higher level than standardized tests might indicate.

Phase III
10th year

ALLEN

Allen was a thoroughly cooperative participant in the study. A phase III student, he is maintaining variable grades, generally C's and D's, which seem consistent with his low standardized test scores. Placed in lower phases by his counselor and the vice principal, Allen objects to being placed with "dummies." He is following a pre-college curriculum, and stated a desire to attend college "like his brothers." The goal appears to be ambitious. The phase system seems to have helped Allen to realize his ability level, and he resents that level. In the face of an ego conflict, it is difficult to predict Allen's academic and/or vocational future. The interviewer and Allen both share this difficulty. In the face of possible emotional difficulties, the ungraded system may be of little value to Allen.

Phase III
10th year

GAIL

Gail never developed enthusiasm for the evaluation study, nor was the interviewer able to motivate her. Boredom rather than hostility seemed to typify her behavior. It would appear that her attitude toward school is one of engagement without commitment. The interviewer received the impression that Gail was aimlessly marking time. The phase program could be permitting her to choose safe levels of participation so that she can avoid commitment. Counseling might be of value to Gail.

Phase II
10th year

BETTY

Betty is a phase II student who is not achieving at a level commensurate with her ability. Scoring at the 50th percentile on standardized tests, she is achieving mixed grades of B's, C's, and D's. Although co-operative to the extent that she answered questions readily, she never volunteered information. She appeared to lack self-confidence, which lack may be overcome with higher grades she earns in phase II classes. It is suggested that her lack of confidence contributes to a negative attitude toward school. She has stated: "I'm dumb . . . I can't study . . . I just can't understand things." She stated a vocational preference to become an airline stewardess or a secretary, and denied the possibility of college. It would appear that Betty might function better under a more structured school environment than Amherst's. It seems that the Amherst system is perhaps too open-ended for one of Betty's limited confidence. Counseling might enable her to see that she definitely can achieve in Amherst, because she can select performance levels commensurate with her ability as well as with her interests. She, hopefully, will become increasingly aware of this possibility as she goes through high school.

Phase V
9th year

SUSAN

Susan appears to be an intelligent, well-integrated girl with an excellent achievement record. Her poise and easy relationship with adults may be attributable to her having been reared in an Army family who moved around considerably.

It is believed the Amherst-Pelham phase system presents an excellent environment for the intellectual and social growth of so promising a girl. The school enables her to progress at her own pace.

This school would seem to be an enhancing and liberating environment for Susan. It is believed she will maintain the progress of her school success to the ultimate accomplishment of her goals.

Phase IV
9th year

ADAM

Adam represents a contradiction in that he has consistently obtained high scores in standardized tests whereas his classroom achievement has declined, commencing with the 8th grade. Adam is taciturn, albeit not unfriendly. He was difficult to interview inasmuch as he failed to respond to the questioning necessary to elicit sufficient information for a complete study.

On the record, Adam's schoolwork ebbed during the two years and one-half he has been in the Amherst-Pelham system. The ungraded system has apparently not reversed this trend.

Phase IV
9th year

SETH

From an academically oriented family, Seth is a phase IV 9th year student who is achieving A's and B's exclusively. This performance is consistent with standardized test scores and with past scholastic records. Supremely self-confident, Seth plans on a pre-college curriculum, on college attendance, and on ultimately becoming a biologist. High verbal scores and a sampling of writing courses have possibly altered the plans for biology. In any case, it seems apparent that Seth can do well in the Amherst system, and he knows this. The interviewer can find no reason to qualify Seth's confidence in himself.

Phase III, IV
9th year

OPAL

A thoughtful, intelligent and analytical 9th year student, Opal was an excellent participant in the study. A pre-college student in phases III and IV, she is earning A's and B's, which grades are consistent with her high standardized test scores. The student choice aspect of the Amherst system represents a challenge to Opal, and she is determined to obtain as much from high school as may be possible. Her plans call for college attendance. She did feel that phase choice is not open to junior high school students, attributing phase assignments at that level to teachers and to counselors. Her academically oriented family environment contributes to her feeling about school. Opal, enjoying a competitive nature and a degree of self-confidence, enjoys the Amherst school system. It may be estimated that she will profit from it.

Phase III
9th year

HAL

Hal apparently has the mental equipment to complete a pre-college curriculum. It would appear that he has not yet recognized the challenge of the phase program, but additional experience may change that situation. The interviewer believes that Hal is currently "coasting" and is not extending himself to any extent. Although his available records are insufficient for any firm prediction, it is thought possible that Hal might be capable of up-phasing in mathematics and the sciences. His C's in English would appear to reflect disinterest rather than inability to do better. It would seem that he is not utilizing the Amherst system to his best advantage, but is using it to lessen his output as a student.

Phase III
9th year

WANDA

Wanda in 9th year, Phase III, and somewhat insecure as a freshman, would prefer a three year junior high school to "give kids more time to develop." Despite her insecurity, she is achieving largely at a B level and appears happy with the self-placing and self-pacing features of the ungraded system. Her choice of phases and programs was her own, although she consulted her parents about them.

Wanda has a definite vocational goal at this time which she could achieve if she persists. Her educational planning involves a pre-college program. There are some indications that Wanda's vocational interests may shift and there are also some indications that she is choosing phases lower than her abilities in order to avoid too competitive a learning situation.

It would appear that Wanda is feeling her way into a new educational milieu with some degree of hesitancy and insecurity. Hopefully the Amherst system will, by its flexibility, help her to find her way to greater confidence in herself.

Phase II, III
9th year

BEN

Ben is a Phase II and III student who doesn't like school and who is not achieving well. A freshman, Ben has no clear educational or vocational goals. He is pursuing a potential pre-college curriculum although his grades, if continued, might preclude higher education. He suggested the Navy as a possible career. He apparently receives little help from his parents in making phase choices, although he does want to please them; he also alleges no help from teachers or counselors. It is estimated that Ben may possibly be in phases too difficult for him as he has a record of low achievement and his standardized test scores are considerably below average. Ben is accepting responsibility for his phase choices, but is making unrealistic ones. Perhaps down-phasing would help him to succeed, which, in turn, would enable him to become less indifferent. Without change in Ben, it is estimated that the ungraded system in Amherst will be of limited value to him.

Phase III, II, I
9th year

ILENE

Ilene was an apathetic and quite passive subject for the study, somewhat prone to forget appointments. She apparently had no firm relationship or commitment to school, being vague as to the phases she was in; seemingly doing little homework; accomplishing minimally in class and being uninvolved in extracurricular activities. She gave the impression of drifting through both school and life experiences. Achieving generally at the C and D level, it would seem that the Amherst system is proving of little value to Ilene. It is possible she could have benefitted from more individual attention than she received. She left school in April because of illness; it is assumed she will not return during the current year. It is difficult to assess the nature and/or the responsibility for the failure of Ilene to achieve but apparently the school has done little to motivate success.

Phase IV
8th year

BART

A member of an academically oriented family, Bart is primarily a phase IV student who achieves well and who expresses an appreciation of the phase system for the opportunity it offers students. Bart is apparently a socially and academically mature 8th year student who has benefitted from the ungraded program. He will probably continue to do so as he seems willing to accept responsibility for his own direction and appears relatively determined to succeed.

Phase IV
8th year

CINDY

Cindy is a high achieving phase IV student who participated well in the case study. She seems to enjoy the freedom of independent study and readily accepts the responsibility accompanying it. Above average in her standardized test scores and in her teachers' evaluations, Cindy would seem to be a student who will profit from the Amherst system. Her apparent attitude and desire to learn are precisely what the ungraded program is designed to instill in students. The program may enhance her desire to learn for learning's sake.

Phase III
8th year

BETH

Beth appears to be a strong average student, making reasonable use of her abilities. It would seem the school system has served her well thus far. Her college goal may be realized although her vocational goal seems only tentative at present.

Beth eagerly anticipates entry into high school because she deems it "more grown up."

It would appear she is unchallenged by the opportunity presented by the Amherst phase system, and seems content to perform reasonably successfully at a comfortable level.

Phase II, III
8th year

MARGO

Margo is a cheerful and undirected 8th year student, apparently drifting through school thus far. In phase II and III levels, she does not plan on more than a high school education. Vocationally, she speaks in vague terms of secretarial work but without a great degree of conviction. She plans a general course of studies. Her test scores indicate she is below average, and her grade records indicate general below grade level achievement. She seems content to let others plan for her, and may encounter difficulty in high school where more decision-making will be expected of her. It may be assumed that the ungraded system will be comfortable for Margo, but not particularly meaningful unless she is motivated to some more definite goals. Perhaps maturity, if this is something one waits for, will come to Margo soon enough to enable her to rechart her course in more definite and meaningful directions.

Phase II, III
8th year

RALPH

Ralph is an 8th year student, planning a pre-college course and he has definite plans to attend college. His vocational plans are as yet unformed. He felt it was too soon for him to make any decisions of that nature. He is apparently undergoing a "growth spurt" and suffers from a certain awkwardness, both of a physical and social nature. An average student according to standardized test scores and elementary school grades, Ralph is apparently working diligently enough to earn B's in phases II and III. He feels that the teachers indicate the desired phase levels to the counselor, who then urges the student to accept them. Ralph looks forward to high school and a greater degree of choice for himself. He seems willing to accept the required responsibility. It is estimated that Ralph, under self-motivation, will achieve even better in high school.

Phase I, II, III
8th year

NED

Ned's achievement in school and his scores on standardized tests have been inconsistent. There is some indication of a tendency to "give up" when things become difficult. From an academically oriented family, one might expect Ned to achieve better, and in phases higher than the I, II, III that represent his course levels. Ned also complained of the imposition of phases on junior high students; he feels there is very little real choice. He doesn't seem interested in college, or in any other goals at the moment. In fact, Ned appears to have a rather negative feeling about school and adults as he feels "they tell me what to do." It is possible that personal counseling is in order for Ned. It is also possible that when he reaches high school, the very real ability to make his own choices may aid Ned in maturing and in making effective use of the Amherst system. To date, it has not been valuable to him.

Phase II
8th year

IRA

Ira has a record of steadily falling behind his grade level in classroom achievement each year through the 7th. This, his 8th year has seen a reversal of the downtrend in Ira's achievement which may possibly be credited to the phase situation. Ira is making his own level of performance choices now, and a beginning of improvement, generated by the indicated acceptance of a minimal self-responsibility, may be in the offing. This, of course, will be validated by his senior high school achievement. Since Ira is only one chronological year behind his grade level, it may be hoped that further exposure to ungraded, phased courses may enable him to continue to improve. Counseling would seem to be beneficial for Ira in senior high school.

Phase I, II
8th year

LAURA

Laura is an "alienated" black girl who bears resentments against several teachers and administrators in the Amherst system. She sees school as "the only way to get ahead." She would like to go to college, but this goal seems unrealistic inasmuch as her phases are largely I and II. She has stated a vocational interest in nursing or the Peace Corps. She doesn't feel that she had much choice in her phase levels, but she acknowledges her responsibility for her own achievement. Her desire to achieve, unfortunately, is variable from time to time, which is reflected in varying grades from term to term. She does see the phase program as affording students the opportunity to perform in conjunction with their intellectual peers. It would appear that her racial defensiveness might be the most significant hindrance to her obtaining the most from the ungraded system. The above also makes it difficult to assess her chances in the system. Race difference seems to be one variable the ungraded system did not take into account.

Phase IV
7th year

CARL

Carl is a 7th grade student earning A's and B's at phase IV level in a pre-college program. A self-reliant boy, Carl fully utilizes all sources of advice and educational aids available to him. The ungraded program has given him the opportunity to work at a level commensurate with his ability and desire. Although not all higher phase courses are challenging enough for Carl, most do provide him with the chance to exhibit his talents and indulge his interests.

Phase IV
7th year

NANCY

Nancy is poised beyond what might be accepted of a normal 7th year student. This may be attributable to travel and school in several foreign countries and in several states as well. The travel is the result of her father's varied teaching positions, and will include another move in the coming year. Above average on standardized tests and in her achievement, Nancy assumes she will attend college and her scholastic record indicates the probable correctness of her assumption. She has done well in phase IV level courses, and it could be estimated that the Amherst system is one that would serve her well and faithfully. It would appear, however, that Nancy's innate ability and her sophistication acquired through travel would enable her to excel in any type of educational system.

Phase IV, III
7th year

GLENN

Glenn would appear to be above average according to intelligence test scores, and in the 90 percentiles according to achievement tests; yet his grades are not correspondingly high. Glenn is chronologically one year younger than his classmates, having enrolled in school at age 5. Glenn's interests tend to vary and his school participation tends to change accordingly.

In consideration of the above, it may be estimated that Glenn will generally benefit from the ungraded, phased programs available at Amherst, because he may vary his phases and his curriculum in consonance with his interests. The interviewer estimates that channelizing his abilities and interests in directions of his own choosing, under non-restrictive supervision, may enable Glenn to develop more fully and successfully than he would be able to do within a traditional school environment. The Amherst system would appear to be the best educational mode for a youth like Glenn.

Phase III
7th year

TINA

Tina is a relatively undistinguished girl in the 7th grade, in phase III for all of her courses. Coupled with decreasing scores in standardized tests are decreasing achievement levels. Although following a pre-college curriculum, she apparently has only the vaguest of goals, either academic or vocational.

Although friendly and willing to participate, Tina didn't contribute any more than asked to. Interaction was difficult since she maintained an undefinable, and unbreakable, reserve.

Phase II
7th year

CATHY

Cathy was a good participant in the survey; articulate, informative, and cooperative. Always well-liked by her teachers, she has never achieved at a high level, which has allegedly hindered development of self-confidence. Although Cathy would seem to have arrived at a realistic appraisal of her abilities and to have chosen her phases and curriculum accordingly, she might succeed at a phase III level in some of her courses. This would seem commensurate with her achievement on standardized tests. This conclusion is further supported by the fact that she has raised her grades while apparently not required to invest much effort in her classes.

Her parents apparently have played a passive role in phase selection, although they are willing and cooperative in all contacts with school officials. Cathy's guidance counselor indicated that her parents accepted her phase choices in lieu of motivating her to attempt a higher level. Perhaps additional counseling would help Cathy develop confidence and an academic/vocational maturity equal to her considerable social maturity.

Phase I, II
7th year

LARRY

Larry is a 7th year student in phase I and II levels. His grades are not evidence of success. His parents are college educated, although there is no apparent urging from them that he try to achieve better. His educational goals are nebulous, if not non-existent at this point. He does enjoy independent study in areas that interest him, and this contributes considerably to his academic advantage. His standardized test scores are below average, and his grades may be all that could be expected of him assuming that the tests were accurate. Having no choice of phases, he seemingly has developed no feelings of responsibility, but he does seem to try harder where necessary. Unfortunately, his trying is variable in its duration and direction. It is difficult to assess the potential of Larry in terms of the ungraded system. Perhaps, with added experience and attention from the school, he may grow to fully appreciate the self-direction it affords him.

Statistical Data

Information obtained from the sampled participants was collated and then converted to statistical data. Information on the educational and socio-economic status of parents was obtained, as well as reports of the students' view of their school and education.

A strong orientation toward higher education was a significant aspect of the data, which showed 70.8% of the participants enrolled in pre-college curricula and planning, in various ways, for college education.

Vocationally, only 18.75% of the sample expressed a definite interest in a specific vocational area. The balance of the participants had either no plans or only tentative ones.

There were clear indications of limited use of the testing-out procedure available in Amherst and limited use throughout the year to change phases, either up or down. Only 2% of the sampled 48 participants phased down, and then on teacher recommendation.

Specific data were extracted from the study and are presented here. Percentages reflect the proportion of the sampled population. Percentages may not equal 100% because of rounding errors.

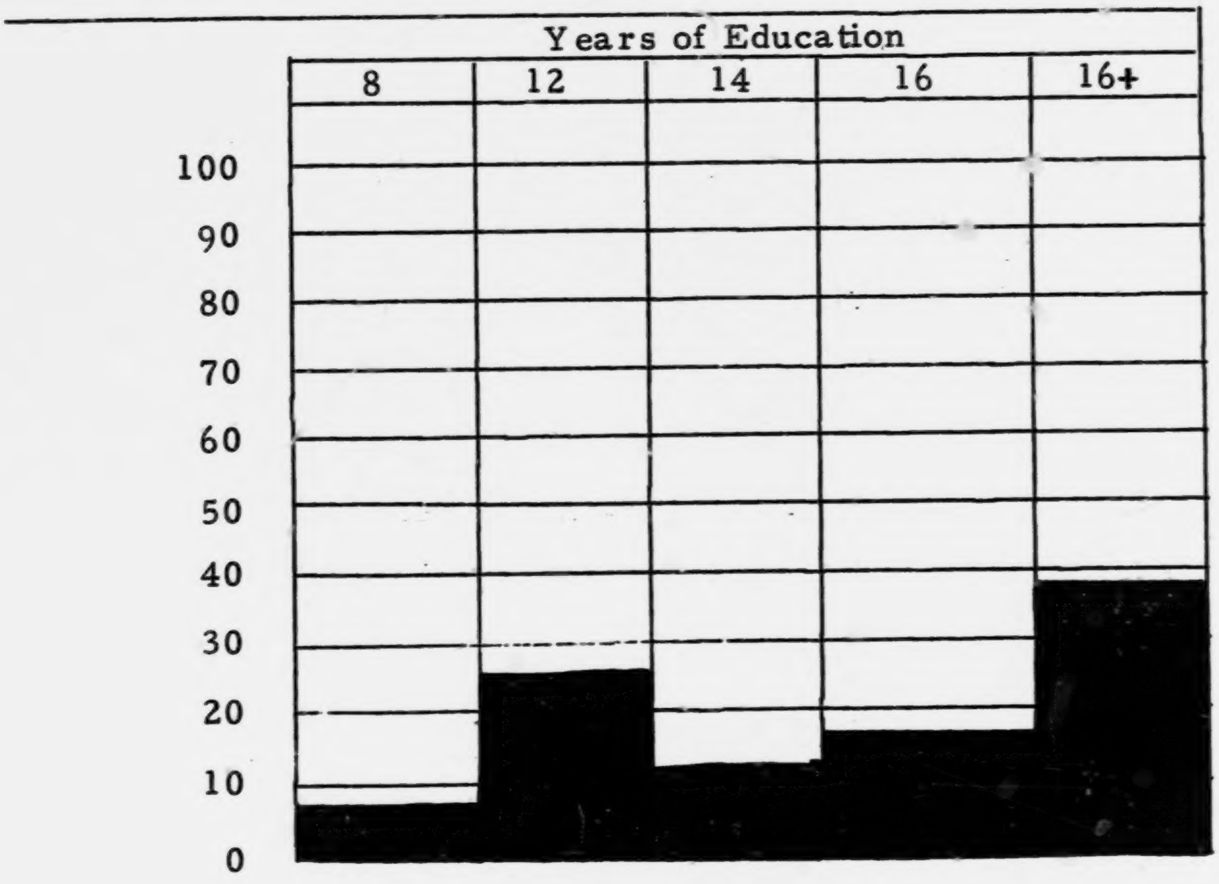
Parental Data

Sixty-seven percent of the fathers of the participants had 14 or more years of education. Complete data may be seen in Tables 1, 2 and Figure 1.

Table 1. Percentages of fathers cross-referenced by SES category and years of education, as reported by participants. N of 48.

	Total Years of Education					Total
SES Category	8	12	14	16	16+	% of Sample
1	0%	0%	0%	0%	5%	5%
2	0	0	5	14	33	52
3	0	12	7	2	0	21
4	5	12	0	0	0	17
5	2	0	0	0	0	2
6	0	2	0	0	0	2
Incomplete data	0	0	0	0	0	1

Figure 1. Percentages of fathers achieving indicated total years of education. N of 48.



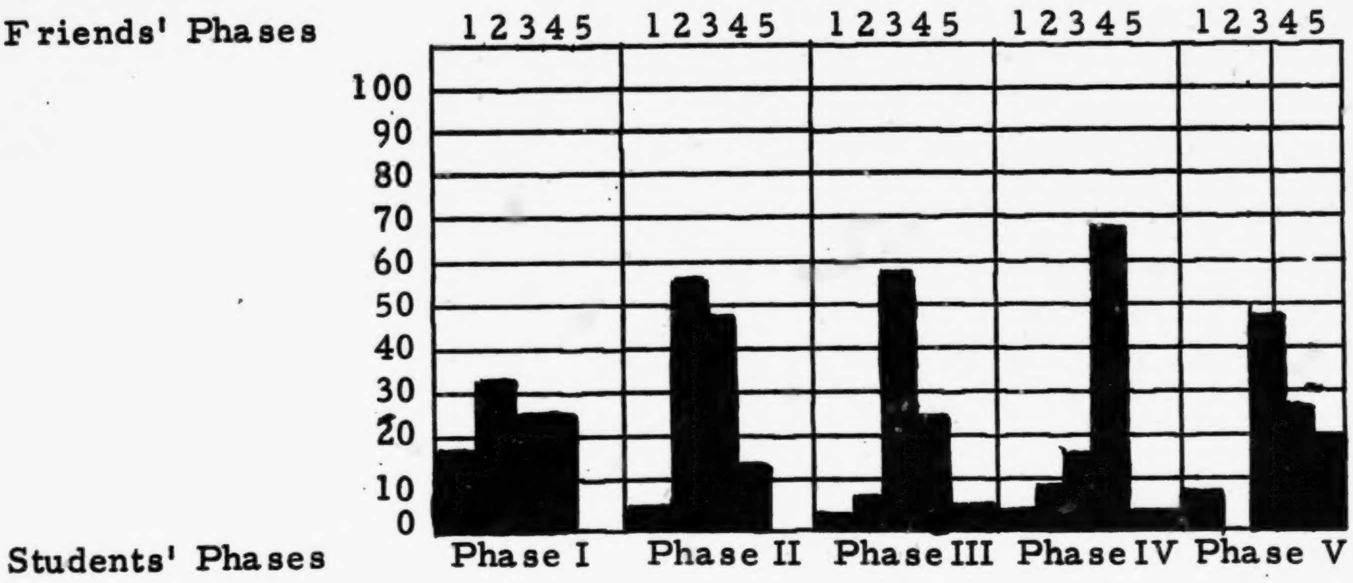
In general, parental background of the sample students included strong orientation to higher education and a generally high SES categorization. These facts are considered to be significant in Amherst secondary schools for their carry-over effect on the academic orientation of the students. The percentage of parents possessing higher education appears to be larger in Amherst than would be found in a typical community.

Social Activities

The sample population was asked to name five friends and to indicate their friends' fathers' occupations. Friends' mean phases and fathers' socio-economic status was later verified by reference to official records by the interviewers.

Most students indicated their friends to be in phases III and IV, with lower phase students reporting a majority of their friends to be in phases II and III. As can be seen in Figure 2, friends of higher phased students are more likely to be in similar phases, but friends of lower phased students come from a wider range of phases.

Figure 2. Percentages of sample students by phase reporting in which phase their friends were located. N of 48.



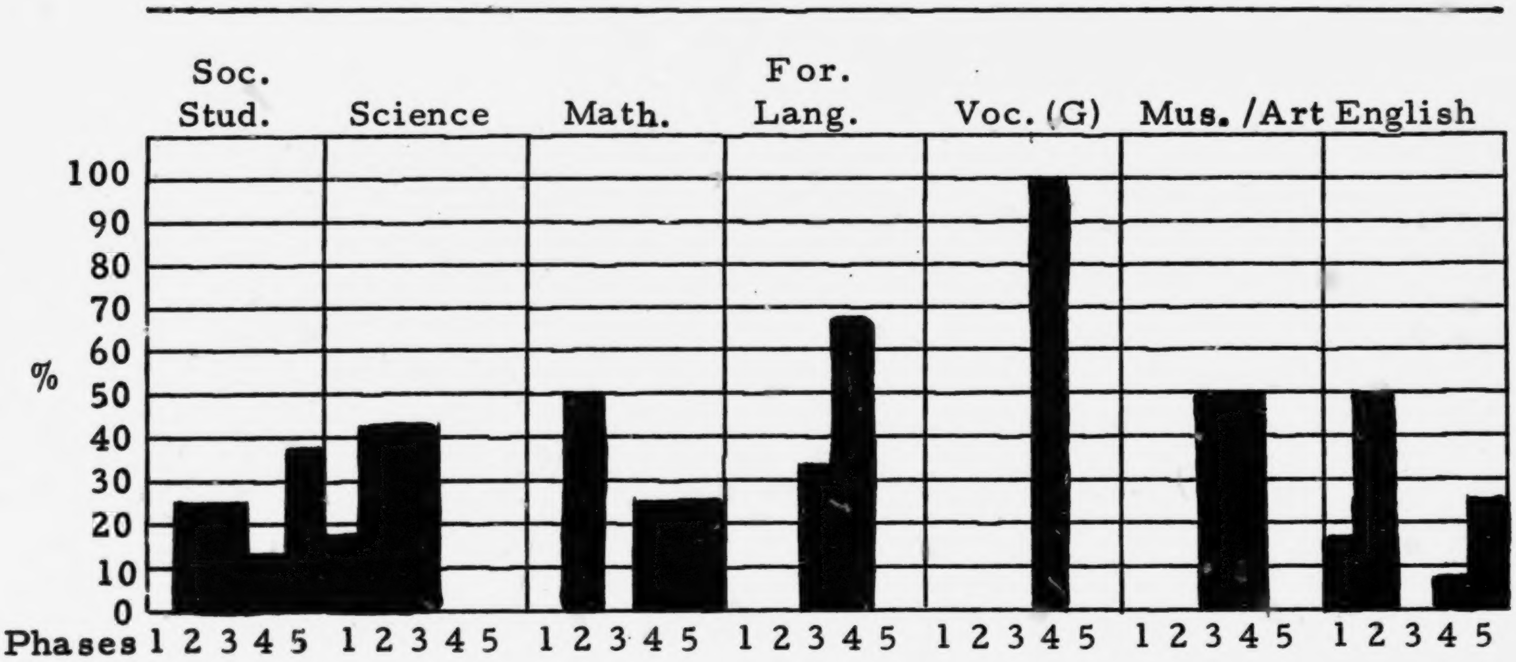
Classroom Performance (Misc.)

The data dealing with the subjects liked "most" and liked "least" by members of the sample illustrated differences by phases. Also obtained were reasons for their preferences. Each student was asked to name one subject in each category of "least" and "most" liked subject.

Liked "most" were English by 29%; science by 19%; and mathematics by 10%. Other areas of study, such as business, industrial arts, or physical education were either not selected, or were chosen by small percentages of the sample.

Figure 3 indicates choices of subject areas liked "most" by students in the five phases.

Figure 3. Percentages of sample students by phase, and the subject areas they liked "most." N of 48.



Liked "least" were foreign languages by 30% of the sample; social studies by 25%; and mathematics by 23%. Other subject areas were either not named, or were named by less than 10% of the sample.

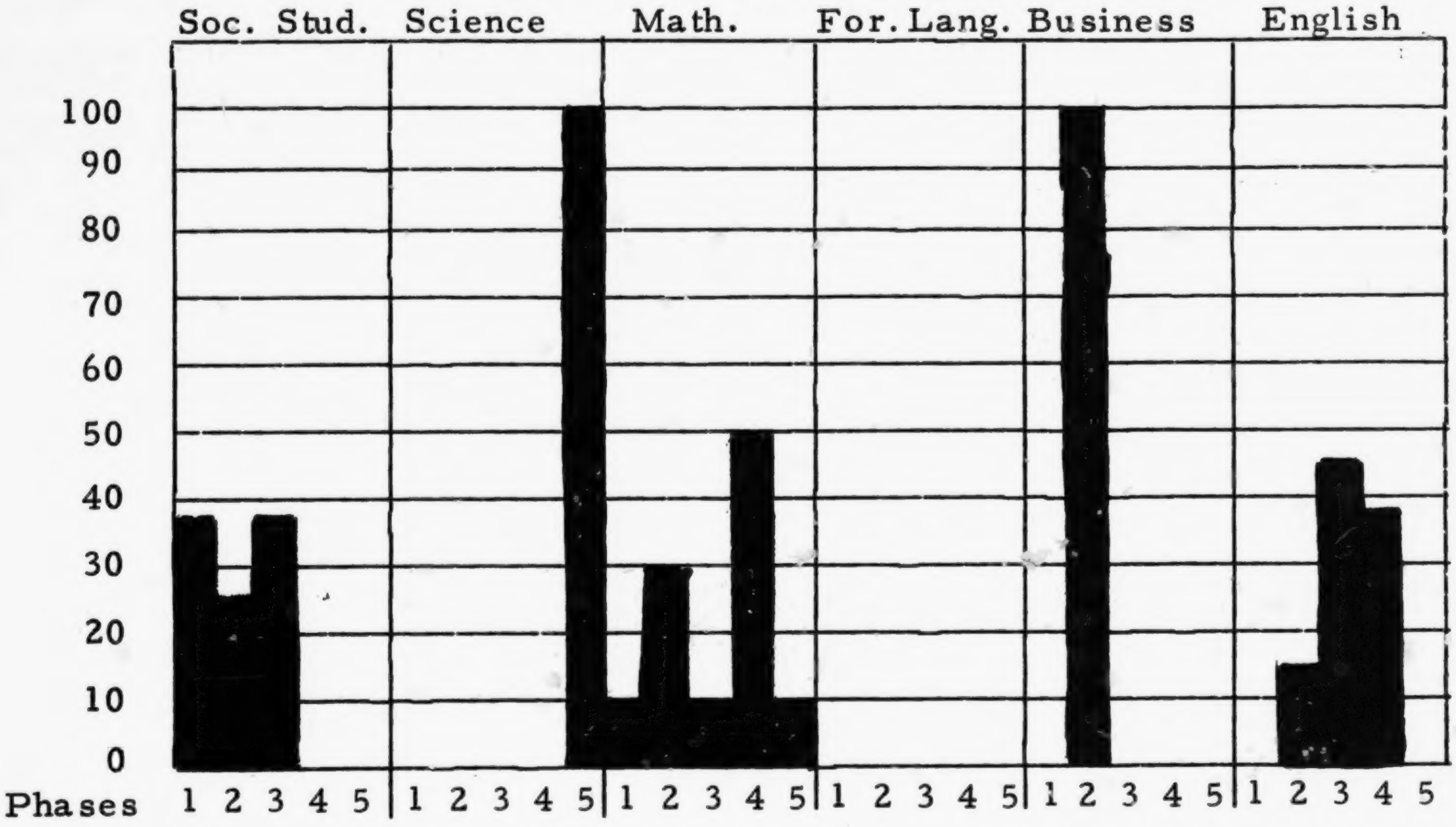
Mothers appeared as well educated as fathers inasmuch as 43% of sample mothers have 16 or more years of education; 6% of sample mothers have 14 years of education.

Table 2. Percentages of fathers and mothers with indicated years of education. N of 48.

Percentages	Fathers' Years of Education	Mothers' Years of Education
2%	8	8
2	12	8
5	8	12
24	12	12
7	14	12
2	16	12
5	16+	12
2	12	14
2	14	14
2	16+	14
7	16	16
20	16+	16
2	14	16+
2	16	16+
12	16+	16+
4	Incomplete data	

Figure 4 indicates choices of subject areas liked "least" by students in the five phases.

Figure 4. Percentages of sample students, by phase, and the subject area they liked "least." N of 48.



The principal reasons for liking a subject "most" appeared to be the subject itself, although the teacher was an equal or more important reason in phases I and II. Conversely, the teacher was the reason cited for liking a subject "least" by phases I and V. Gross percentages, with some losses because of rounding, may be seen in Tables 3 and 4.

The higher the phase, the more important the subject area itself is in determining that a student likes the subject area.

Table 3. Percentages of participants, by phase, and their cited reasons for liking a subject area "most." N of 48.

Reasons for choice

Phase	Teacher	Subject	Easy	Friends	Challenging
I	50%	50%	0%	0%	0%
II	55	36	0	0	9
III	11	78	11	0	0
IV	8	83	0	0	8
V	17	33	0	0	50

Table 4. Percentages of participants, by phase, and their cited reasons reasons for liking a subject area "least." N of 48.

Reasons for choice

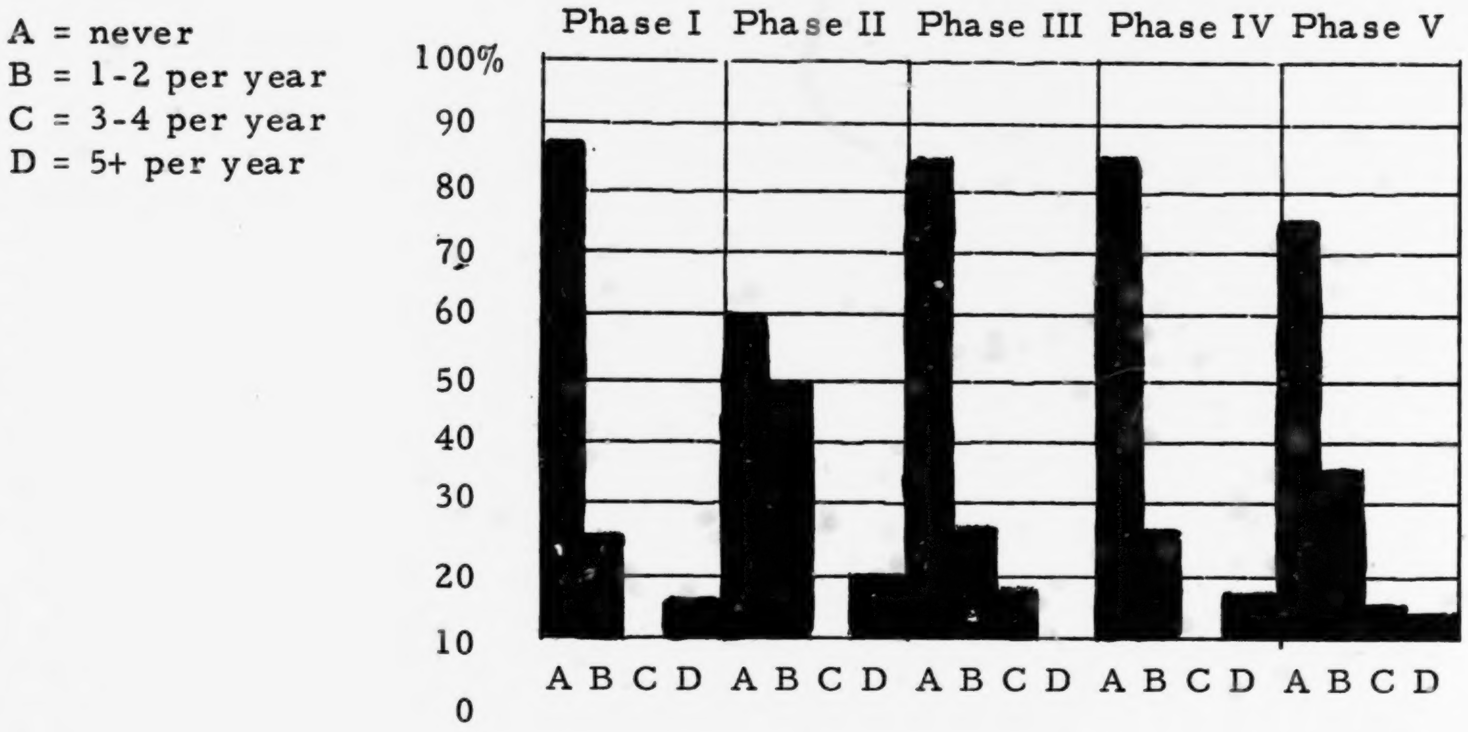
Phase	Too Hard	Too Easy	Teacher	Subject	No Friends
I	0%	0%	67%	33%	0%
II	36	0	27	36	0
III	0	0	27	73	0
IV	19	6	25	50	0
V	0	0	100	0	0

Classroom Performance

Information was collected and was used to determine sample student perceptions and evaluations of teaching methods and test usage.

It appeared that there was limited use of outside resources: such as field trips, speakers, etc. The percentages of students and their observations may be found in Figure 5.

Figure 5. Percentages of sample students, by phase, and their reports of frequency of use of outside resources for classes. N of 48.



Types of instructional methods used varied considerably by subject areas. Principally used were the traditional techniques of discussion and lecture. Approximately equally used were audio-visual, question and answer, and experience project techniques. A more specific presentation of reported techniques may be found in Table 5. Small percentages were omitted from the table.

The tendency of the sample students was to rate their instruction (as a process) as "O.K." or "good." Eight percent of phase V and 10% of phase II students gave the only "poor" ratings encountered.

Ratings by subject areas also tended to fall in the "O.K." and "good" categories. See Table 6 for precise percentages.

Table 5. Percentages of sample participants reporting three principal methods of instruction in indicated subject areas. N of 48.

Social Studies

Discussion (26%) Lecture (18%) Audio Visual (18%)

Science

Experience Projects (20%) Discussion (19%) Lecture (18%)

Math

Problem Solving (29%) Question & Answer (24%) Discussion (18%)

Foreign Language

Read & Recite (32%) Question & Answer (21%) Audio-Visual (21%)

Business

Read & Recite (20%) Experience Projects (20%) -- Then -- Discussion, Question & Answer, Problem Solving, Other - all (13%) each

Vocational (Boy's)

Experience Projects (33%) Audio Visual (33%) Lecture (22%)

Vocational (Girl's)

Discussion (33%) Lecture, Audio Visual, Question & Answer, Group Research -- all (17%)

Music/Art

Experience Projects (25%), Discussion, Lecture, Audio-Visual, & Other -- all (17%)

English

Discussion (31%), Question & Answer (20%) Read & Recite (17%)

Table 6. Percentages of sample students by subject area, and their ratings of teaching methods by subject area. N of 48.

Subject Area	Poor	O.K.	Good
Social Studies	15%	41%	44%
Science	2	24	74
Mathematics	3	41	56
Foreign Languages	0	58	42
Business	0	38	63
Industrial Arts	0	60	40
Home Economics	0	100	0
Music/Art	0	67	33
English	0	46	54

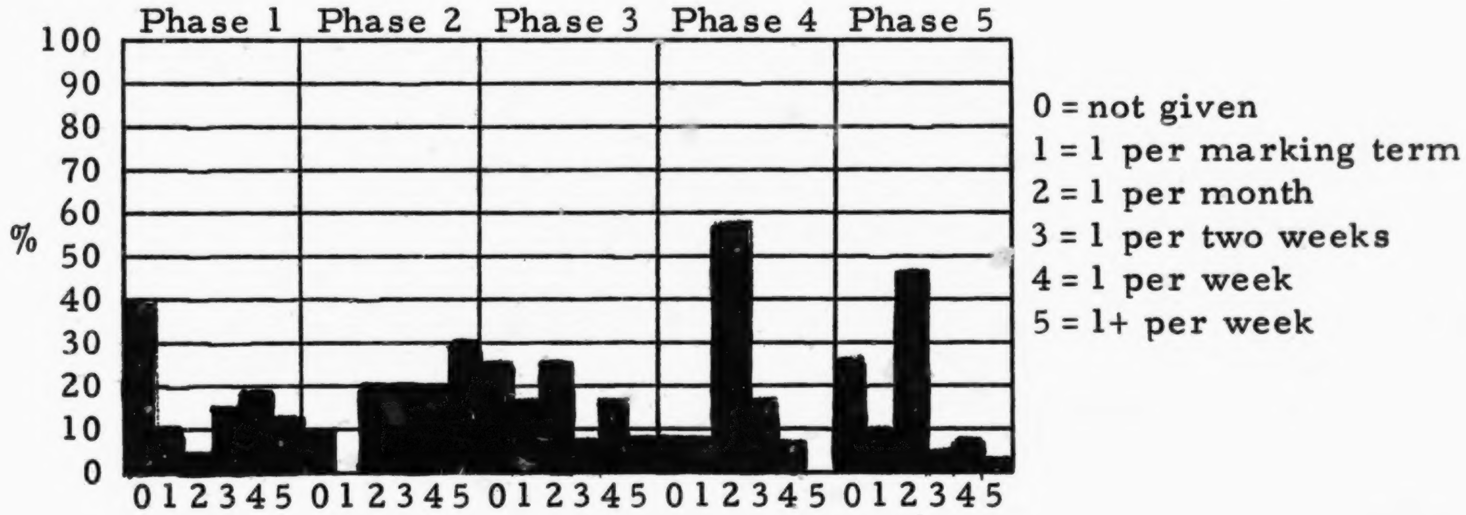
Ratings of courses (as to outcome) again tended to cluster under "O.K." or "good." In this evaluation there was also a percentage of students who preferred not to respond. Table 7 contains percentages, with missing values attributable to rounding.

Table 7. Percentages of sample students and their evaluation of their gain from specific subject areas. N of 48.

Subject Area	Poor	O.K.	Good	No Response
Social Studies	18%	41%	36%	5%
Science	2	38	50	10
Mathematics	3	26	51	20
Foreign Languages	0	30	27	43
Business	0	38	25	37
Industrial Arts	40	40	20	0
Home Economics	0	100	0	0
Music/Art	0	100	0	0
English	0	25	40	35

The sample population was also asked to report on the frequency and type of tests; how they were graded; and their weight in total term marks. There appeared to be some variation in reported frequencies as seen in Figure 6.

Figure 6. Percentages of sample students, by phase and test frequencies they reported. N of 48.



Types of tests reported indicated some differences between testing of higher and lower phase students. The higher phases reported extensive use of "essay" tests while the lower phases reported use of "combination" tests. Interviews indicated these tests were a combination of objective and brief essay questions.

Figure 7 illustrates the types of tests reported by the different phases.

Figure 7. Percentages of sample students, by phase, indicating types of tests they encountered. N of 48.

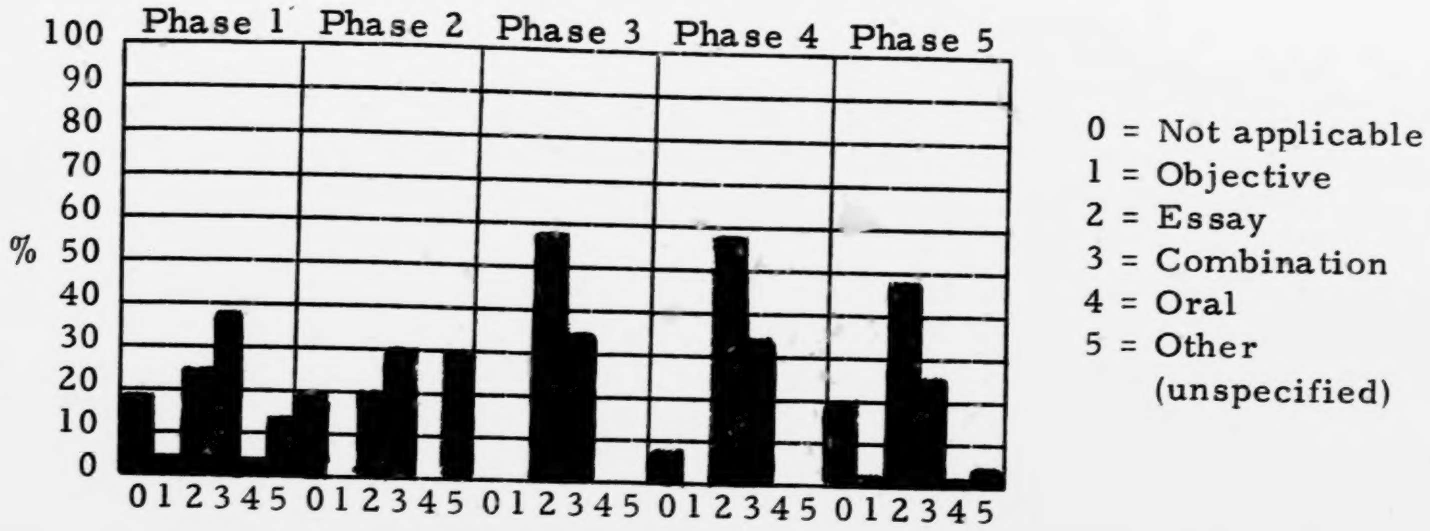


Table 8 indicates the differences by subject areas.

Table 8. Percentages of sample students, by subject area, and types of tests they reported. N of 48.

Subject Area	Objective	Essay	Combination	Oral	Other (unspecified)	Not applicable
Social Studies	18%	3%	62%	15%	0%	3%
Science	21	2	40	31	2	2
Math .	28	0	33	38	0	0
Foreign Lang	27	0	27	39	6	0
Business	38	0	0	63	0	0
Indust. Arts	0	0	20	40	0	40
Home Econ.	0	0	0	0	0	100
Music/Art	0	0	0	0	0	100
English	4	7	59	30	0	0

There was a broad number of responses to the question "How are tests graded?" which indicated approximately equal usage of "Pass/Fail", letter, and numerical grades. No significant variations appeared to exist, nor did interviewer follow-up reveal any active concern with how their grades were represented.

Although sampled students were queried on their knowledge of how much test grades counted in their term grades, the majority either did not know, or qualified specific percentages as being estimates.

A final item of importance to classroom performance was deemed to be the use of independent study as a technique. The sample population was asked to indicate whether or not they did participate in independent study. Three percent of phase 1 and 6% of phase 5 students did not respond. See Table 9, below, for specific percentages.

Table 9. Percentages of sample students, by phase, participating or not participating in independent study. N = 46.

Phase	"Yes"	"No"
1	29%	68%
2	50	50
3	25	75
4	33	67
5	30	64

Caution should be exercised in the interpretation of data on independent study since definition often varies by subject area and by class.

Grades

Student grades were the subject of a specific data sheet and information sought, aside from grades, was student perceptions of the accuracy of the evaluations.

Also sought was student and parental assessment of the grades as a reflection of capabilities of the student, as perceived by both student and parent.

Additionally, consistency of grades with estimated abilities, as indicated by standardized test scores, was determined where test scores were available.

Grades used were those following completion of the first marking term. Table 10 contains the grades used. Conduct and Effort ratings appear in Tables 11 and 12, respectively.

Table 10. Percentages of sample students, by subject area, and grades they received for those subjects. Ratings for 1st marking term. N of 48.

	Grades				
Subject Area	F	D	C	B	A
Social Studies	2%	5%	12%	44%	37%
Science	0	11	11	39	39
Mathematics	7	10	12	46	24
Foreign Languages	6	9	11	49	26
Business	0	22	33	44	0
Industrial Arts	0	17	17	17	50
Home Economics	0	0	50	50	0
Music/Art	0	0	33	50	17
English	0	4	18	52	25

Table 11. Percentages of sample students, by subject area, and conduct ratings received in those classes. Ratings for 1st marking term. N of 48.

Subject Area	Excellent	Average	Unsatisfactory
Social Studies	90%	7%	0%
Science	93	5	2
Math.	80	17	2
Foreign Languages	91	9	0
Business	78	22	0
Industrial Arts	83	17	0
Home Economics	100	0	0
Music/Art	67	33	0
Physical Education	No ratings recorded		
English	82	14	4

Table 12. Percentages of sample students, by subject area, and efforts ratings they received for those subjects. N of 48.

Subject Area	Good	Fair	Poor	Not Reported
Social Studies	76%	20%	2%	2%
Science	84	11	5	
Math.	76	17	7	
Foreign Languages	71	26	3	
Business	67	0	33	
Industrial Arts	83	0	17	
Home Economics	100	0	0	
Music/Art	50	33	17	
English	75	21	4	

A review of Tables 10, 11, 12 indicates a basis for relationship between letter grades received and effort made. This appears particularly true for business, industrial arts, and music/art.

The greater part of the sample population agreed that grades accurately reflected student educational output, with a low of 50% and a high of 93%. See Table 13.

Table 13. Percentages of sample population, by subject area, and indications of agreement or disagreement with accuracy of grades according to student output. N of 48.

Subject Area	"Yes"	"No"	No response
Social Studies	76%	24%	0%
Science	89	11	0
Math.	93	7	0
Foreign Languages	77	23	0
Business	78	22	0
Industrial Arts	50	33	17
Home Economics	50	50	0
Music/Art	50	33	17
English	86	13	2

Parental agreement with grade accuracy approximated the percentages exhibited by the student sample. See Table 14.

Table 14. Percentages of sample population, by subject area, and indications of parental agreement or disagreement with accuracy of 1st marking term grades according to student output. N of 48.

Subject Area	"Yes"	"No"	No response
Social Studies	78%	12%	10%
Science	77	11	11
Math.	85	12	2
Foreign Languages	77	17	6
Business	67	22	11
Industrial Arts	50	33	17
Home Economics	50	0	50
Music/Art	50	33	17
English	86	4	11

The sample students were also asked if they thought their grades were an accurate assessment of their capabilities. Contrary to student-reported accuracy of grades in terms of assessing their output, almost one-half of the students reported disagreement that grades received reflected their capabilities. The disagreeing students tended to imply they could do better, with greater effort.

Table 15. Percentages of sample population, by subject area, and their agreement or disagreement that their 1st marking term grades accurately reflected their capabilities. N of 48.

Subject Area	"Yes"	"No"	No response
Social Studies	56%	41%	2%
Science	55	43	2
Math.	54	46	0
Foreign Languages	43	57	0
Business	56	44	0
Industrial Arts	50	33	17
Home Economics	50	50	0
Music/Art	50	50	0
English	43	55	2

Homework

Homework was considered as a separate area within the study. Responses were sought from the sample as to time spent on homework, grades received, student opinion of the value of their homework, and the weight of homework grades in total term grades. Differentiation between phases and among individuals was expected.

The major portion of homework assignments are not graded and, in the lower phases, such assignments are reportedly limited in number. The greatest percentages of reported grades are A's and B's. It would appear that homework is not utilized to a great extent in the Amherst system.

Tables 16 and 17 represent homework grade distribution by phase and by subject area, as reported by the sample population.

Table 16. Percentages of sample population, by phase, and homework grades reported. N of 48.

Phase	F	D	C	B	A	Not graded or Not assigned
Phase 1	11%	0%	11%	11%	11%	56%
Phase 2	0	3	8	18	8	63
Phase 3	0	0	6	12	9	74
Phase 4	0	0	2	23	25	50
Phase 5	0	0	0	56	22	22

Table 17. Percentages of sample population, by subject area and homework grades they reported. N of 48.

Subject Area	F	D	C	B	A	Not assigned or Not graded
Social Studies	0%	0%	4%	23%	8%	65%
Science	0	0	7	18	14	61
Math.	4	4	9	22	0	61
Foreign Lang.	0	0	0	14	24	62
Business	0	0	0	75	0	25
Industrial Arts	0	0	0	0	33	67
Home Economics	0	0	0	0	0	100
Music/Art	0	0	25	0	25	50
English	0	0	3	14	26	57

The amount of time reported as spent nightly in doing homework varied according to phases; the higher the phase, the more time spent on homework. Maximum time spent was reported as 45 to 60 minutes, by 44% of phase 5 students in the sample. See Table 18 for complete details.

Table 18. Percentages of sample population, by phase, and time reported spent nightly in accomplishment of homework. N of 48.

Phase	1-15 min	15-30 min	30-45 min	45-60 min	60+ min	Not applicable
1	11%	22%	11%	0%	0%	56%
2	21	26	18	3	3	29
3	18	24	35	0	0	24
4	10	27	35	17	2	10
5	0	11	22	44	22	0

Homework tended to be assigned only in the academic areas. Reported amounts of time spent on homework, by academic subject area, may be found in Table 19.

Table 19. Percentages of sample population, by subject area, and time reportedly spent on homework accomplishment in subject area, when assigned. N of 48.

Subject Area	1-15 min	15-30 min	30-45 min	45-60 min	60+ min	Not applicable
Soc. Stud.	19%	23%	12%	19%	4%	23%
Science	7	32	32	0	0	29
Math.	13	26	43	9	0	9
For. Lang.	29	29	19	5	0	19
Business	25	38	25	0	0	13
English	9	20	26	17	9	20

Student evaluation of the homework assigned was sought. See Table 20 for those evaluations.

Table 20. Percentages of sample population, by phase, and their evaluation of their homework assignments. N of 48.

Phase	No Value	Some value some of the time	Some value most of the time	Has value most of the time	Usually valuable	Not applicable
1	22%	0%	11%	11%	0%	56%
2	0	26	11	18	18	26
3	12	24	6	18	21	21
4	0	10	17	31	35	8
5	0	0	22	44	33	0

Table 21 represents the stated degrees of value ascribed to specific subject areas by students.

Table 21. Percentages of sample population, by subject area, and evaluation of their homework in those areas. N of 48.

Subject Area	No Value	Some value some of the time	Some value most of the time	Has value most of the time	Usually valuable	Not applicable
Soc. Stud.	4%	19%	12%	31%	19%	15%
Science	4	18	7	21	21	29
Math.	9	13	17	26	35	0
For. Lang.	5	24	10	29	14	19
Business	0	25	13	38	13	13
English	3	11	17	20	29	20

The sample population was also questioned about the weight of homework grades in total term marks. Generally, they were able only to estimate such weights. It would appear that the students have little concept of how their term marks are derived, as they apparently don't know the weights of either test grades or homework grades in their total term grades.

Independent Study

The utilization of independent study was one of the major objectives of the ungraded program. It was believed a strong student involvement would indicate a large degree of self-direction and would imply a positive commitment to the Amherst ungraded system. Unfortunately the challenge of independent study would appear not to have been accepted fully, as only

29% of the sample reported being involved. Of those involved, nine were females and five were males.

Of the fourteen students engaged in independent study, nine were conducting two projects in different areas simultaneously.

A problem in definition existed, particularly in the question of what constituted a special class project. It is believed that some students so involved may not have considered their involvement as independent study. Some question also existed in the minds of 7th and 8th year students who weren't too certain of what usage of the Learning Resource Center was "independent," and what was not.

Figure 8 illustrates the types of independent involvement and the percentages of students in each phase reporting involvement. Table 22 illustrates similar involvement, by subject area.

Figure 8. Percentages of sample population, by phase, and types of projects in which they reported involvement. N of 14.

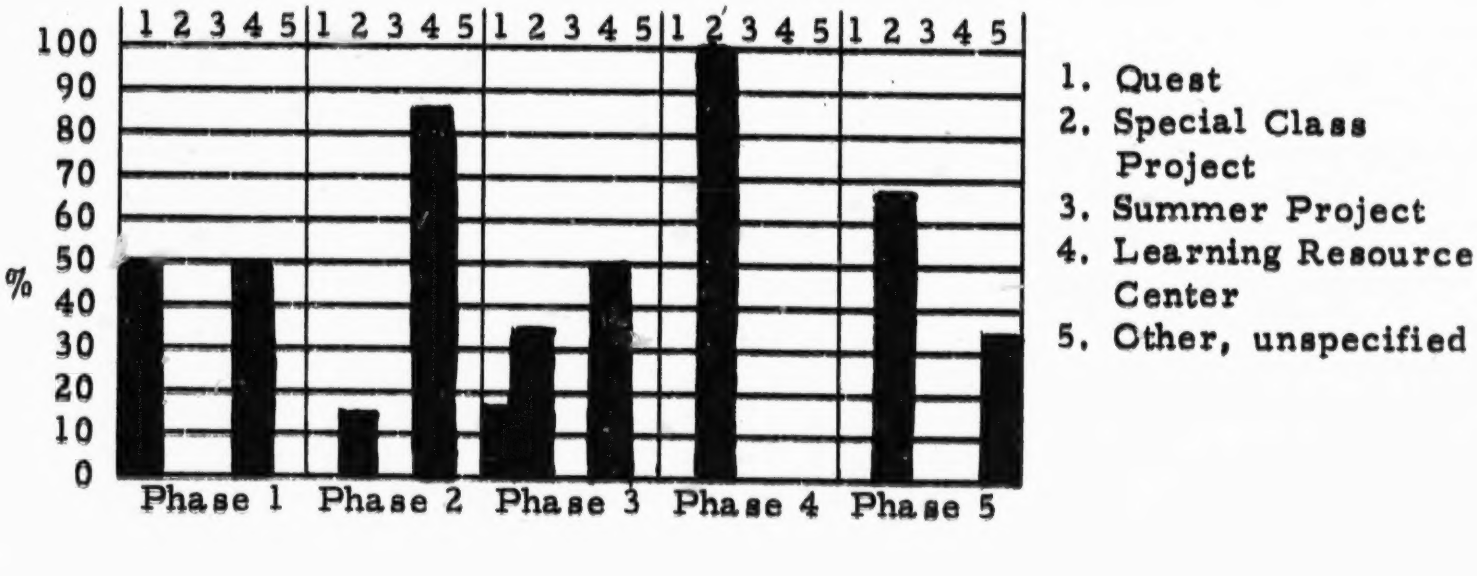


Table 22. Percentages of sample population, by subject area, and types of independent study projects reported for those areas. N of 14.

Subject Area	Quest	Special Class Project	Summer Project	Learning Resource Center	Other unspecified
Social Studies	0%	60%	0%	20%	20%
Science	14	14	0	71	0
Math.	50	0	0	50	0
Foreign Lang.	0	0	0	100	0
Business	0	100	0	0	0
English	0	71	0	29	0

Students revealed that the major motivator to independent study was the teacher, with the student as self-motivator a significant second. See Table 23.

Table 23. Percentages of sample participants, by phase, and their indicated motivators to independent study. N of 14.

Phase	Student	Teacher	Parent	Group	Other unspecified
1	0%	100%	0%	0%	0%
2	57	43	0	0	0
3	33	67	0	0	0
4	20	60	0	0	20
5	33	67	0	0	0

When analyzed by subject area, the teacher was the paramount influence in initiating independent study, except for social studies and mathematics for which the student himself was a stronger motivator.

Four different general types of independent study methods were specified. Table 24 indicates the types and percentages of the sample population reporting their utilization.

Table 24. Percentages of sample population, by phase, and study methods they reported using for independent study projects. N of 14.

Phase	Historical Research	Contemporary Research	Experiment	Special Facilities	Other unspecified
1	0%	0%	0%	100%	0%
2	0	57	0	29	14
3	0	50	0	33	17
4	80	20	0	0	0
5	67	0	33	0	0

Most sample participants reported their independent study experience as valuable, when analyzed both by subject area and by phase of students. See Table 25 for illustration.

Table 25. Percentages of sample population, by phase and their ratings of independent study as valuable or not valuable. N of 14.

Phase	Yes	No	No Rating
1	100%	0%	0%
2	86	14	0
3	83	17	0
4	80	0	20
5	100	0	0

There was a tendency for grades of independent study projects to be either A or B, with no significant departures from the pattern.

Independent study grade weight in total term mark again is comprised of estimates, the sample population apparently having no firm information on this subject.

Teacher encouragement to complete independent projects was reported by significant percentages of the sample population, when analyzed either by phase of students or by subject areas. See Figure 9 and Table 26 for specific percentages.

Figure 9. Percentages of sample population, by phase, and their report of teacher encouragement or lack of encouragement to complete independent study projects.

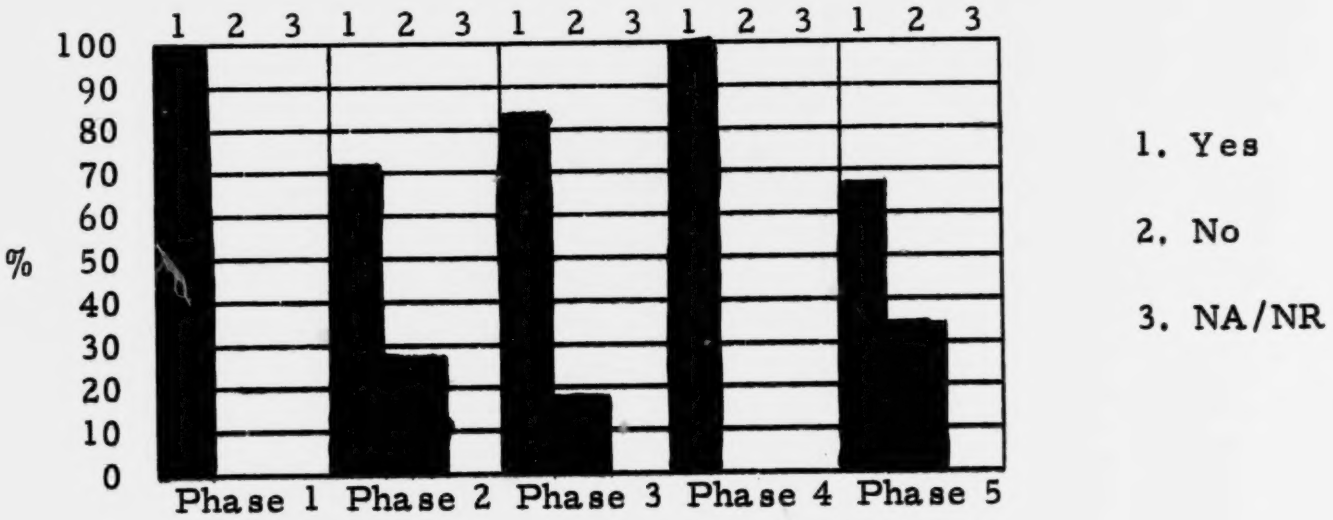


Table 26. Percentages of sample population, by subject area, and their report of teacher encouragement or lack of encouragement to complete independent study projects.

Subject Area	Yes	No
Social Studies	80%	20%
Science	86	14
Mathematics	100	0
Foreign Languages	0	100
Business	100	0
English	86	14

Summary

A population of 48 secondary school students was randomly selected on the basis of sex, fathers' socio-economic status (SES), year in school, and phase. Each student was interviewed throughout the 1967-68 school year to observe his perceptions of his school and his education.

Three trained interviewers were each assigned randomly 16 students by sex, father's SES, year in school, and phase. They obtained student responses to questions pertinent to teaching procedures, family background, social activities, grades, homework, tests, phases, testing-out, independent study and the like contained in data sheets which are shown in the Appendices. Clarity and comprehensiveness of the data were sought by the use of interview techniques.

The information collected from each student was compiled in the form of individual case studies. The data were also subjected to statistical analysis in order to investigate any normative findings. Each interviewer studied the same 16 students throughout the school year.

Major elements of the findings from the 48 case studies are enumerated in the remaining part of this chapter.

1. Amherst appears to be a community with a large proportion of parents who have high formal educational achievement. Sixty-seven percent of the fathers and 49% of the mothers of the sample population had completed a minimum of fourteen years of education. This may help explain the high percentage of secondary school students following "pre-college" courses of study (70.8%).

2. There appears to be a high relationship between a father's socio-economic status and phase placement of his children. Fifty-two percent of the students whose fathers were in the top one-third in socio-economic status were in phase 4 while only 13% of the children with fathers in the low one-third in socio-economic status were in phase 4.

3. An apparent relationship between phase placement and personal friends exists as the sample population indicated their friends to be in the same or next higher phase levels. The previous year study with all students, although not as strong, indicated similar results--students tend to select or develop friends with those in the same phase, however students would not be as likely to move down phase to be with friends as up.

4. Student attraction or distraction for a course is affected by phase placement of the student. Phase 1 and 2 students appear more affected by the teacher and his methods or procedures while phase 3, 4 and 5 students reported that the subject content itself was influential in whether they liked or disliked the course. More specific results are as follows:

Business, physical education, and industrial arts were not named as liked "most" by any member of the sample.

No phase 3 students named mathematics, industrial arts, or English as liked "most" subjects.

A large proportion of phase 2 students named mathematics and English as liked "most" subjects.

With respect to liking a subject "least," phase 5 students named science.

One-hundred percent of the sample phase 5 students in science courses liked science "least." Also 100% of phase 2 students liked business "least."

Social studies courses were liked "least" by phase 1, 2, and 3 students.

English was liked "least" by phase 2, 3, and 4 students.

5. A broad cross section of the sample population indicated that usage of outside resources (field trips, guest speakers, etc.) was limited.

6. The sampled population indicated a strong reliance on discussion and audio-visual means as instructional techniques. Music/art, home economics, and business were the subject areas for which the wider variety of instructional techniques were reported. Students tended to rate the teaching methods of science courses highest, followed by business, mathematics, English, and social studies.

7. Lower phase students reported having fewer tests than did higher phase students. The higher the phase, the greater the reported incidence of essay question use. There were indications of a generalized omission of the use of purely objective-type tests in all phases.

8. The 48 case studies were examined for common problems and attitudes which relate to the achievement of the nine objectives of the Amherst ungraded program. Several factors appear to emerge.

A. Down phasing has social significance for the following reasons: classification as college preparatory, identification of friends, and pressure from parents. Perhaps no reference should be made that phases 3, 4, and 5 are college preparatory. When socio-economic status of the father is high, there is considerable pressure reflected by the students not to go below phase 3. Students seem to feel down phasing is socially demeaning, or as Mark said about the selection of courses, "It's social suicide not to pursue an academic program."

B. Teachers appear to differentiate more by grades than by phase placement.

C. When different phases are in the same class, evaluation procedures are perceived by students as being most "unfair" to lower phases, i.e., Elementary Functions, phases 3, 4, 5.

D. Students in the case study population who lacked confidence in themselves as students, appeared to need encouragement and motivational counseling. Otherwise, they all tended to select lower phases where they saw success as assured. Here is a unique group that deserves concern if self-selection of phases is to work effectively.

E. Phase 1 and 2 students perceive the teacher and counselor choosing phases for them which they accept. Phases 4 and 5 see themselves as ultimately responsible for phase selection.

F. The honor roll, compiled regardless of phase, has lost its impact on upper phase students as an external motivator. This seems reversed for lower phased students.

G. Independent study seems to be more in the category of extra class work. (See case study of Rita)

H. The expected relationship between student observations of their courses and anticipated career choice was not drawn by many students. Most of the 48 students studied seemed to believe that college entrance was a career choice in itself.

9. Over the two years of the evaluation study, growing numbers of students are seemingly clustering and selecting the middle phases. Teachers attending to individual difference by a variety of unique courses appears on the decline.

CHAPTER IX: SUMMARY AND RECOMMENDATIONS

This report summarizes a two year investigation dealing with an evaluation of the secondary schools of the Amherst-Pelham Regional School District. Their program has been identified and conceptualized as an ungraded system by the administration and teaching personnel of the District. The objectives set forth are compatible with those used to describe ungraded programs in general. Chapter II documents the similarities between the rationale of the Amherst-Pelham Junior and Senior High Schools and the ungraded systems as described in the literature.

In terms of evaluation, a tactical decision had initially to be made concerning whether to conduct a study using external criteria and control schools or whether to use internal criteria and generate descriptive data. In reference to the former alternative, difficulty was noted in empirically delimiting those specific objectives common to the modern, American comprehensive secondary school. The wide differences of opinion among citizens as well as educators concerning the "proper" objectives of the school, the impossibility of controlling sufficient variables in so global a sample and set of treatments, the difficulty in finding a matched school, and the vagueness of overall educational objectives (e. g., worthy home membership, wise use of leisure, etc.) were influential in the decision not to use this approach.

Staff

The evaluation team consisted of four faculty members at the School of Education, University of Massachusetts:

Ronald H. Fredrickson Associate Professor	1966-67, 1967-68
Jules M. Zimmer Associate Professor	1966-67, 1967-68
Lawrence E. Wightman Assistant Professor	1967-68
Ralph R. Pippert Professor*	1966-67

Nine advanced graduate students in the Counselor Education Department, School of Education, University of Massachusetts, were involved in data gathering and analysis.

Thomas J. Crowley	1967-68
L. Edward Dolhenty	1966-67
Mrs. Norma Gluckstern	1966-67
Leon Silber	1966-67
Robert White	1966-67
Miss Stephanie Griffin	1967-68
Charles Popkin	1967-68
Dennis Gurn	1967-68
Nicholas Snoddy	1967-68

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* Professor of Education, University of Manitoba

Mr. Jack Clinch was contracted as programmer, and all analyses were completed with the CDC 3600 computer, located at the University of Massachusetts. Other members of the staff included a secretary and a key punch operator. Office space was provided in the senior high school, and interview facilities were available in both junior and senior high schools. Mr. Kenneth Caouette was especially helpful in processing data and duplicating school records.

Procedures

Specific questions and hypotheses were enumerated under each of the nine objectives of the ungraded program. Data were gathered by a variety of methods to respond to the specific questions and hypotheses.

In the first year of the evaluation, a more normative approach was used in collecting and analyzing the data. Ninety percent of the students and a random sample of parents were interviewed by trained personnel. Eighty-seven percent of the faculty and staff were interviewed by the faculty members of the evaluation team. The interview responses made by students, teachers and parents were recorded by the interviewers and categorized by independent raters.

An activities checklist, a study methods inventory, and standardized achievement test batteries were administered to all students according to a prearranged schedule. Phase changes and school attendance were studied for all students.

Letters were mailed to five colleges seeking reactions to the secondary school transcript, unique in that grades are weighted by phases to determine rank in class.

In the second year, a stratified random sample of 48 students was selected and individual case studies were developed for each, as the year progressed. A standardized achievement test was administered to tenth year students. Curriculum consultants reviewed the courses of study developed to implement the objectives of the program, and homework was sampled. A second stratified random sample of 48 students was selected and interviewed for verification purposes. Finally, multiple regression techniques were utilized to compare phase placement and marks with test and inventory performance, attendance, attitude measures, and other variables.

The following data were used to answer specific hypotheses and questions in a direct manner:

- Interview data of
    - Parents
    - Students
    - Staff
- Activities checklist
- Study methods survey
- Standardized achievement tests
- School records
    - Marks
    - Attendance
    - Conduct
    - Phase
- Case Studies

In addition, general observations pertaining to the Amherst ungraded program were made by utilizing the following data:

> Evaluation of courses of study by curriculum consultants
>
> Regression data, which included 41 variables in predicting grade point by subject and year

Findings

The objectives will be dealt with singularly. In the service of brevity, only the more predominant findings will be included.

1. To provide an instructional program that minimizes the requirement for a direct relationship between the chronological age of a student and his placements in a curriculum.

The majority of teachers (70 percent) having students of different chronological ages in the same class did not feel that problems had arisen because of this. The majority of the student interviewees either liked having students of different ages in their classes (30 percent) or stated that it made no difference (29 percent). Older students and students in higher phases tended to object less frequently to the presence of younger and/or older classmates.

The senior high school appears to have made more progress than the junior high school in minimizing requirements for a direct relationship between chronological age of a student and his placement in a curriculum. Eight-four percent of the high school teachers as opposed to 39 percent of the junior high school teachers said that they had students of different chronological age in the same class. Students appeared to be little concerned about having students younger or older in their classes.

However in nearly all cases the age difference is seldom beyond two years. When different phases were in the same classroom, students perceived evaluation procedures as being most unfair to the lowest phases in the class. The perception of the student is borne out by the fact that teachers who have mixed phases within a specific class tend to grade lower phase students lower than higher phased students.

2. To provide an instructional program that establishes the greatest possible relationship between a student's placement in a curriculum and his needs and abilities as an individual.

There did not seem to be strong departmental organization of curriculum in foreign language departments in either junior or senior high school. Junior high school science and industrial arts programs appeared to be organized by teacher rather than by department.

Students reported homework assignments to be differentiated by phase more in senior than junior high school. Differences initially appeared to be associated with quantity rather than quality.

Teachers felt that behavior problems were no more than usual (41 percent) or that they had been reduced (17 percent). Some, however, felt that such problems had increased in frequency (11 percent), particularly as they related to the free pass system in the senior high school.

There appears to be a strong relationship between a father's socio-economic status and phase placement of his children. Fifty-two percent of the students whose fathers were in the top one-third in socio-economic status were in phase IV while only 13% of the children with fathers in the low one-third in SES were in phase IV.

There is also a relationship between phase placement and personal friends. Students in phases III, IV, and V (especially IV) predominantly named as their closest friends, students in the same phases. Lower phased students indicated a wider distribution of friends among the phases. This is not to say there is a causal relationship between phase placement and friends, but that phase placement does have social relevance.

Factors listed as important in determining student groups were "getting along with others" (24 percent), interests (19 percent), grades (18 percent) and phases (13 percent).

The majority of students and teachers responded favorably to the ungraded organization.

3. To allow individual students to pursue their studies at rates commensurate with their individual abilities.

According to students, an individual's rate of progress in large part depends upon his teacher's goals and objectives.

Changing of phase appeared easier to accomplish in an upward direction than downward. Scheduling conflicts were occasionally a problem once the decision had been made to change. However, very few (one percent) had to change phase because of schedule conflicts.

Teachers were more frequently perceived by lower phase and younger students than by upper phase and older students as willing to spend additional time with them. Classroom teachers played a more significant role in down phasing than up phasing.

Pressure from parents in the selection of phases appears the most intense when a student is in a phase II or below class. This pressure.

seems particularly acute in families of high socio-economic status in the community. Phases III, IV, and V are considered college preparatory, thus they are perceived as socially acceptable and academically superior.

The expected relationship between student preferences for their courses and anticipated career choices was not drawn by many students. Most of the 48 students studied closely during the second year seemed to believe that college entrance was a career choice in itself.

4. To provide a curriculum that allows recognition of the values in experiences other than those gained in a formal classroom situation.

Seventy-two percent of the teachers indicated that ample opportunity existed for individuals in all phases to participate in extracurricular activities and hence to gain from experiences other than those of the formal classroom. An activities checklist, administered to students in the senior high school, revealed that upper phase students, particularly girls who were receiving A's and B's, spent more time in extracurricular activities than did other students.

Generally, the greater the involvement with extracurricular activities, the higher the student academic achievement. Conversely, the greater the involvement with non-school related functions (for example T.V., employment), the lesser the student academic achievement. Apparently objective four is partially being met for upper phased, high achieving students but not for lower phased, lower achieving students. The broad use of outside resources such as field trips and community speakers appears limited.

In the second year of the evaluation study, students rated the teaching methods of science courses highest, followed by business, mathematics, English and social studies.

5. To provide pupils with the opportunity to pursue independent study programs separate from the study programs provided in formal classes.

The school classifies three types of independent study. First, special part-time study projects such as extra work in a regular class. Second, a full-time course not regularly offered in the curriculum may be followed under the supervision of a staff member or one of the faculty members at a nearby college or university. Third, students, not necessarily phase V students, may "pursue a rigorous program of independent research in depth under the guidance of a high school staff member and/or an outside consultant." This is called the Quest phase.

The evaluation team uncovered limited use of Quest projects. A variety of extra-class projects were being pursued, although many students did not see this as independent study. Problems of definition of independent study remain.

The Individual Study Center (I. S. C.) in the junior high school has contributed in providing the materials and atmosphere for independent study. Seventy-seven percent of the junior high students used the I. S. C. for more than 10 school periods, and 89 percent of the junior-high school teachers who used I. S. C. rated the completed "contract" projects as well-done or excellent. Students commented on the enjoyment of learning at their own rate and freedom to select materials. A more complete report of I. S. C. is available in "Background and Evaluation of Individual Study Center".

Billie M. Howes, Coordinator, September, 1968.

Interview and Activities Questionnaire data show that for a large number of courses in the schools, independent study was not being included.

Generally, the library was regarded positively by a large number of teachers and students. However, the need for more conference rooms, more teaching machines, and more space was cited. Lower phase students use the library for studying while upper phase students more frequently mentioned other purposes such as research. Although it might reflect the types and amounts of available material, proportionally more senior high students than junior high students liked their library.

Audio-visual services were listed as available and useful, although some comment was made of reduced funds for films. With the exception of the library and to a lesser extent the learning research center, facilities were not fully utilized for independent research. Little mention was made of laboratories, shops, business machines, and the like in independent study or in interdisciplinary research projects.

6. To grant each pupil a major share of the responsibility for directing his own educational program.

Students, especially in the senior high school, have considerable responsibility for selecting their own phase and course of study. However, approximately one quarter of the teachers questioned the wisdom of this objective and suggested need for more guidance and assistance in phase selection. Teachers, who reported that students were much more likely to move up in phase to be with friends than down, played a greater role in moving students down in phase. Eighteen percent of the teachers mentioned parental pressure in selecting higher phases.

When students move down in phase, it is primarily because work is too difficult (36 percent), they want to "take it easy" (20 percent), or they are urged to do so by the teacher (15 percent). Parents, particularly those of lower phase students, viewed the guidance counselors as being the biggest help in selecting phases.

It is interesting to note that a number of suggestions were made by students regarding the effectiveness of phasing. Twenty percent did not want to change the phase system, and three percent wanted to go back to traditional course organization. A number of lower as well as upper phase students spoke of the need to make work as well as marks different among phases.

A relationship exists between phases and student responsibility for course selection. That is, upper phase students as a group tend to be almost totally responsible for the courses selected whereas students in lower phases share the responsibility with others, principally parents. It is interesting to note that parents of upper phase students are generally better informed regarding school than parents of lower phased students. If indeed the latter are more influential in course selection, a great deal more information should be made available to them.

Students in the second-year case study population who lacked confidence in themselves as students, appeared to need encouragement and motivational counseling. Otherwise, they all tended to select lower phases where they saw success as assured. Here is a unique group that merits special concern if self-selection of phases is to work effectively.

> 7. To encourage each student to develop an inward desire to learn (as opposed to a desire based only on such outside pressures as adult approval, tests, grades, credits, and getting promoted to the next grade or school).

Inward desire to learn was defined as one which emphasized less external characteristics in the learning situation. A "great deal" of competition for grades was noted by 50 percent of the teachers, although lower phase students seemed to compete with the teacher more than with each other. Parents did not see themselves as being as influential in student performance as the teachers felt they were. Rather, they (39 percent) viewed their child's personal goals as a factor affecting performance. Some parents, particularly those of lower phase students, reported that teachers determined performance to a large extent.

Students mentioned a variety of ways in which teachers were successful in motivating them to learn. Teacher interest in the subject, the capacity to involve students in discussion, and the utilization of audiovisual aids were frequently mentioned encouragements to learning. Younger students and those in lower phases spoke more often of the importance of humor and audiovisual aids; upper phase individuals cited student involvement and discussions.

Students reported that they felt an inward desire to learn more than it was attributed to them by parents or teachers. In view of the fact that an "inward desire" is difficult to measure, an abundance of evidence cannot be advanced in support of the claim that this objective has been achieved with great success.

The honor roll, compiled regardless of phase, has lost its motivational impact on upper phased students. This does not, however, appear to be true for lower phase students.

8. To provide each student who is willing to work with an opportunity to succeed (or at least to avoid "failure") in reaching those levels of achievement commensurate with his individual abilities and interests.

The opportunity for all students to experience success and hopefully to generate attitudes and behaviors conducive to learning in the school was sought by the school staff and teachers. It appeared to some students that teachers differentiate among phases in tests by the quality of questions. Moreover, equal distribution of high grades to all phases did not appear to be a reality as reported by teachers; lower phase students seemed to receive a wider range of grades than did upper phases. However, a number of teachers (41 percent) responded that grading by phase had a positive effect on school performance when some students in the lower phases received A's and B's for the first time. Parents did not describe their children as talking about grades and tests at home, and most of the homework they observed seemed to be related to common classroom assignments rather than to individual projects.

As the year progressed, students became increasingly aware of the weighting system used for determining class rank. Students were more aware of the weighting system than were teachers. A's were not as prominent in lower phases.

Insofar as the Study Methods Survey was concerned, "Mechanics of Study" was most important in discriminating between phase level for younger students; for older students, "Attitudes toward School" was most important in discriminating between phase level. Younger mean phase III students had lower "Mechanics of Study" scores than younger mean phase IV students. Older mean phase III students had lower "Attitudes toward School" scores than older mean phase IV students. However, since the distribution of marks was different for the different phase levels (see The Amherst Ungraded Program: A Preliminary Evaluative Report, Closed Questionnaire results), these relationships are confounded with marks.

Lower phase students reported having fewer tests than did higher students. The higher the phase the greater the reported incidence of essay question use. Purely objective-type tests appear on the decline in all phases. Homework was assigned more frequently in the higher phases than in the lower phases although it varied by subject area.

Data collected during the second year of the study tended to show the clustering of the student placement in the middle phases. Thus teachers were beginning to differentiate more by grades than by phase placement.

9. To provide pupils, parents, prospective employers, college admissions officers, and others with a meaningful and realistic appraisal of the achievement of each of the pupils who participates in our instructional program.

Parents seemed reasonably well informed on the principles underlying the ungraded program. The superintendent of schools and the children themselves were the major sources of information.

The parents of higher phase students were more in favor of the ungraded organization while lower phase parents were more likely to have no strong feelings either way.

Little or no criticism was made directly of report cards. However, a number of parents wanted more contact with teachers and school staff. Further study of this problem appears necessary.

Although a majority of parents thought their children were achieving according to their ability, a considerable number (46 percent) thought they could do better.

Generally, the parents of lower phase students were less likely to identify a phase for their son or daughter in English. Eighty-three percent, however, were aware of phase placement.

Admission officers in a variety of institutions experienced no difficulty in accurately interpreting the Amherst transcript.

Observations from the Multiple Regression Data

1. When looking at marks per se, not correlated with anything else, certain features stand out. The average of all marks is 2.91, but subjects areas differ. Math marks are lowest; this is particularly evident in the 7th and 8th years. Science and social studies marks are highest; the 8th year science mark is remarkably high, 3.78. The lowest average mark in the high school belongs to 12th year math (2.58), which, paradoxically, has the highest mean phase.

2. Phase V is rarely used on the junior high school level, while phase I is rarely used in years 9 through 12.

3. Average phase for each year rises throughout high school. Presumably, students stick with those subjects in which they are strong and school drop-outs would be mainly from the lower phases.

4. Of all subjects, English has the lowest average phase in high school though there is little difference from one subject to another.

5. Almost all equations for high school classes include teacher(s) as an important variable. If all teachers were marking with a uniform criterion, teacher would not enter the equation.

6. A teacher assigned score, conduct, is an important variable in some of the equations (e.g., 10th year mathematics and English, ranking first and third respectively). It is interesting to speculate on the possibility that teachers gave bright (or harder working) students good conduct scores, or that they gave well behaved students better marks. It is most likely, however, that success generally eliminated the desire to gain attention in "undesirable" ways.

7. Absences enter 12 of 15 equations in the high school and 4 of 10 in the junior high school. This could be the result of an underlying variable (e.g., interest in school) which accounts for a correlation between attendance and mark or it could be a direct reflection of the amount of content missed. Mechanics of Study became an important variable in 7th year English, mathematics and science, which suggests that teachers expect 7th year students to work independently of the classroom structure. In addition, Mechanics enters into 4 of 6 equations in the subject area of science.

Evaluation of Curriculum Materials

1. The following are generalizations about the curriculum. At the onset it is recognized that the comments do not pertain to all curriculum materials. For example, while the teaching method section in the

Foreign Languages is "recommended as worthy for publication" generally, most evaluations of teaching methods indicated a lack of relating methods to objectives. In addition to this most teaching methods were group methods not individualized.

2. What seems to stand out immediately is stated succinctly by Mr. Keirstead: "It would appear that each course of study may have been developed individually and somewhat in isoltation from the others." In many cases there is no clear rationale as to why specific courses or units are ordered in the manner they are; again this is a general statement, one of the exceptions being the English Department.

3. The notion of decision making in terms of student selection of content seems to have been ignored, and contradicts objective No. 6 to grant each pupil a major share of the responsibility for directing his own educational program."

4. Many of the guides do not distinguish between levels or phase of student. Mr. J. Franklin Fitzgerald, while being able to differentiate "two basic curricula," brings out the crucial points that "no time schedule is given to indicate relative time emphasis on content, no indication is given as to how a student can make a transition from one phase to another." Indeed, is the word phase desirable since the student does not pass through several phases?

5. The reference and aids recommended in most guides were "restrictive," "unimaginative," and in some cases omitted. To have a single book as a reference, or no reference at all, does not offer viable alternatives for students.

6. Evaluation techniques range from giving some fairly comprehensive evaluative techniques, to illustration of a sample test, to having evaluation omitted entirely. In many cases the tests were not relative to the objectives and it was questioned whether the notion of using "honored" testing procedures are truly adequate in a situation which aims for individualized instruction based on the logic of highly specific objectives.

7. Very rarely is the relationship between objective, phase and method spelled out.

8. In no case was there any evidence or provision made for self-appraisal, which would hardly seem in keeping with the stated philosophy "to grant each pupil a major share of responsibility for directing his own educational program."

9. It appears that the learner in most cases is cast in a passive role, a stronger emphasis on laboratory work is recommended, as well as less teacher oriented methods in class.

Final Recommendations

A summary of the major findings of the evaluation of the Amherst ungraded program has been presented earlier in this final chapter. In this last section, recommendations for school personnel action will be presented. These are not conclusive by any means, but point to some of the principal recommendations that the faculty and staff might give first priority.

1. Faculty need to establish criteria for grading, especially within the same subject. There are, regardless of phase, "easy" markers

and "hard" markers. Students recognize this and oftentimes use this categorization in determining phase selection. Uniform criteria for evaluation need careful study within departments. Grade consistency is a special problem when more than one phase is in the same classroom.

2. Ways need to be found to lessen the impact of socio-economic factors in phase placement. Early identification of high ability students from lower socio-economic households and the innovation of "up-lift" programs may tend to minimize the significance of socio-economic factors in later years.

3. Range of phases appears restricted. Students, over the two years, seem to be clustering closer to the middle. What was originally conceived as a five phase system (plus Quest) is becoming a three level system with less differentiation and less attention being paid to individualized differences. Care should be exercised to avoid the old High, Medium, and Low groupings. The differences between the pases need serious study by the faculty. The Guidance Department should continue to conduct studies on the pattern of phase placement and keep the faculty and staff informed.

4. An independent study committee could be formed to clarify the definition of independent study and to encourage greater use of Quest. Homework is not independent study. Credit for independent study which cuts across several subject areas appears limited or non-existent.

5. An interdisciplinary task force should be formed to strengthen and expand testing out procedures. Testing out appears to be rarely used. Consultants could be employed to develop via item analysis techniques large pools of questions for a number of courses.

6. The Pupil Personnel Services Department needs to develop a program for motivational counseling in dealing with a distinct group of students who lack confidence in themselves. This group may run as high as 15-20 percent of the student body. In the self-selection of phases, these students hesitate; while they think they might be able to do the work in a higher phase, they do not dare risk "guaranteed" success in the lower phases.

7. Attitude Toward School, as measured by the California Study Methods Inventory (CSMI) was one of the early factors in the regression analysis that proved potent in predicting grades and mean phase placement. A combined student, staff, parent, and faculty task force might attack this problem which appears more acute in the upper years of high school.

8. CSMI Study Habits, although not as significant as Attitude Toward School, was also an important variable in predicting grades and phase. A formalized course or series of sessions might be launched, especially in junior high school, dealing with study skills.

9. It probably comes as no surprise that attendance as a predictor of phase and grade came in on 12 out of 20 regression formulae. Poor conduct ratings were also a significant variable. Continuation of the World Around You (WAY) curriculum could be of considerable help in alleviating motivational causes of poor attendance and conduct. Group counseling and individual case studies, when presented to concerned teachers, may also have a remedial impact.

10. Student goals in terms of career choice may be a source of motivation not adequately touched in the courses of study. The goal of college

college admission in itself does not alleviate the necessity to plan some form of career.

11. It is imperative that greater effort be made to provide more teaching methods that attend to individualized learning. An expansion of the Individual Study Center into the senior high school could be of assistance, as might a programmed learning section in the libraries. Attention might be given to the self-directed study techniques and procedures being developed at the Mid-Continent Regional Educational Laboratory at Kansas City, Missouri. The use of teacher aides and references from outside the classroom needs to be expanded. When more than one phase is in the same classroom, limited accomplishment of the ungraded objectives occurs.

12. The junior high school seems to have made more progress toward reaching the objectives of the ungraded program during the second year of evaluation while the senior high school has regressed. Although some overall progress has been made, the evidence seems clear neither school is where they anticipated being when the evaluation was initiated two years ago. It might be advisable to conduct seminars on the methods of leadership utilized in the two schools.

13. The value of student and parent input in curriculum and course of study development should be noted. Efforts should be made by the staff and faculty to establish departmental advisory committees consisting of parents, students, and outside consultants which might review and suggest general policies and procedures for greater effectiveness of the classroom environment.

14. Extracurricular activities are needed in greater variety for the lower phases, especially the boys. Lower phase students tend to be non-participants in many of the activities outside the classroom.

15. Better ways must be found to provide normal and routine opportunities for parents and teachers to discuss student progress. The Guidance Department might facilitate this with permanent review and test interpretation widely publicized as available for all parents.

16. The school administration should continue to support financially summer projects for teachers in curriculum development and innovation. This massive effort was in large part responsible for the changes that occurred in the classroom. The second stage and the results of this evaluation might best be implemented with continued administrative support including stipends for teachers, consultant services, and secretarial assistance.

17. The advent of the ungraded organization and new courses of study make it imperative that faculty members keep each other informed of what is being done in their classrooms. Timely departmental and interdepartmental meetings devoted to exchanging relevant and practically useful information would be most useful.

Departments might find it useful to develop a data bank of evaluation techniques. The school's data processing center might be able to assist in organizing this service.

There are many questions left unanswered and a large number of recommendations that could be made. On the basis of this effort, the authors do not claim that the ungraded program is better than any other system for similar comprehensive high schools. It is our believe, however, that the Amherst ungraded program is not another skirmish into the seemingly infinite number of educational innovations whose evaluation seems to indicate that the students are no less nor no better than students in any other type of educational program. With the ungraded program, the faculty, staff and students have launched a new era in their school; ultimate accomplishments will no doubt rest upon the significant steps taken during the last two years to individualized instruction.

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ANNEX B
OE/BESE
TITLE III

THE AMHERST UNGRADED SECONDARY SCHOOLS

AN EVALUATION REPORT

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Vol. II

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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APPENDIX A. REVIEW OF THE LITERATURE

The fact that people differ in ability has been recognized for centuries, but it has been only within the past fifty to seventy-five years that these differences have been subjected to serious scientific study. The concept of designing instructional programs in terms of individual differences among pupils has been accepted in principle by most forward-looking educators and teachers for at least forty years. The question today is not one of whether there are to be provisions for individual differences, but how adjustments and adaptations should be made for individual pupils.

The common belief seems to be that learning can be made more effective if the variability within class groups is reduced. First thoughts, therefore, turn to the possibility of forming classes on the basis of homogeneity of some trait -- reading ability or general ability. The practice of homogeneous grouping has become so widespread that no further description is needed here.

Goldberg, et al (18, 1966) reported that a steady flow of studies and discussions about grouping began in the early 1920's, reached a peak in the middle 1930's and then dwindled sharply. Since the late 1940's there have been an increasing number of grouping proposals and studies concerning the effects and the effectiveness of grouping. Earlier practices concerned grouping within an established grade pattern; recent studies have been characterized by efforts to group students without reference to grades.

The intent of this review is to survey the research in the area of grouping for individual differences with emphasis on studies related to ungraded systems. It is recognized that ungraded is not synonymous with ability grouping. However, much of the research dealing with the effects of ability grouping and its attempt to provide more opportunities to individualized instruction is pertinent to the attempt to study the ungraded structure.

Ability Grouping

In reviewing the research on ability grouping it is evident that the quantity is great and dates back nearly fifty years. Goldberg, et al (18, 1966) observed that "The quality is irregular and the results are generally inconclusive." A noticeable contrast between the older and more recent studies reveals that the latter involve larger numbers of children over longer periods of time. Goodlad, in the Encyclopedia of Educational Research (19, 1966) suggested that "perhaps the most controversial issue of classroom organization in recent years is whether or not students of like ability should be grouped together for instructional purposes."

Representative examples of the reviews of research and recent research studies are reviewed below:

(1) Billet (5, 1932) conducted a survey of the theory and practice of grouping through an analysis of some 182 studies available at the beginning of the 1930's. In one form or another, the studies aimed at evaluating either the different bases for grouping, or the effect of different kinds of grouping on pupil achievement. The general conclusions Billet drew from

his analysis of the research, plus seven experiments which he himself conducted, were:

(a) In the absence of conclusive or consistent evidence either for or against homogeneous grouping, the question of whether to group or not cannot be answered in any final terms.

(b) Homogeneous grouping should be based on "traits" such as I. Q., probable learning rate, or index of brightness.

(c) Grouping on the basis of I. Q. shows marked measurable advantage for slow pupils, some advantage for average pupils, and slight disadvantage to bright pupils.

(d) It is futile to take merely the administrative step of grouping the slow pupils unless constant efforts are made to improve and differentiate the content and the teaching.

Among the trends in the study of homogeneous grouping, Billet found the general recognition that "so-called homogeneous grouping in practice produces not homogeneity, but reduced heterogeneity."

(2) Cornell, in his review of published studies on ability grouping in the Thirty-Fifth Yearbook of the National Society for the Study of Education (38, 1936) concluded that experimental studies have in general been too piecemeal to afford a true evaluation of the results, but when attitudes, methods and curricula are well-adapted to further adjustment of the school to the child, results both objective and subjective, seem favorable to grouping.

(3) In the Encyclopedia of Educational Research (19, 1960), Goodlad observed that studies since the 1930's had not added to precision of the conclusions or clarification of the problems analyzed by Cornell in 1936.

(4) Elizabeth M. Drews (14, 1963) attempted to determine the effect of homogeneous and heterogeneous grouping on the achievement of children at three ability levels in ninth grade English classes. She found that placement in homogeneous classes did not significantly alter the achievement progress of any ability group as tested by the measures used. It was concluded that homogeneous classes appeared to have little advantage over heterogeneous classes for the average students as judged by teacher, peer, and self-ratings.

(5) Borg (6, 1966) studied elementary, junior high and senior high school pupils with regard to the effects of two grouping systems: one that differentiated curriculum principally by adjusting the rate of material presentation and a second which differentiated the curriculum principally through the use of enrichment. He found little to differentiate between the effects of ability grouping with acceleration and heterogeneous grouping with enrichment. He concluded that the grouping patterns had no consistent, general effects on achievement at any grade level.

(6) Probably the most recent literature survey regarding the effects of ability grouping in graded systems was completed by Goldberg, Passow, and Justman (18, 1966). From their own work and from other studies in ability grouping, they concluded that schools will continue to rely on various grouping techniques in their attempt to differentiate instruction, at least until such time as procedures for more completely individualized instruc-

tion become incorporated into school policy and teacher preparation. It is, therefore, on the differentiation and appropriate selection of content and instructional method that the emphasis should be placed.

Ungraded schools

Since the 1940's there have been numerous approaches to grouping which depart from the more traditional procedures. A review of the literature on individualization within the ungraded structure reveals a lack of comprehensive empirical evidence, particularly on the secondary level. Most of the literature concerning ungraded experiments relates to the elementary school, and evaluation studies tend to rely on personal observations.

The National Education Association conducted a survey among 441 school systems with enrollments of 12,000 or more (30, 1965). Results of this survey indicate that the primary grades are those most frequently replaced by a nongraded sequence. At this time, nongrading in junior and senior high schools appeared to be mainly experimental. Only twelve large school systems reported any nongrading at all at the secondary level, and most of these were on a trial basis.

The literature on ungraded schools reveals no recent surveys as to the number of high schools now operating such a system. However, there is an increase in the number of articles which are appearing in current periodicals, indicating that more school systems are conducting experiments with ungraded organizations, if not for the complete school then for some subjects within the "graded" structure (4, 1966; 7, 1966; 26, 1963; 29, 1966; 33, 1964; 34, 1958).

Empirical evaluation concerning the effectiveness of the nongraded approach in secondary schools is lacking. However, Goodlad and Anderson conducted a survey of practices among elementary schools in 89 communities (20, 1962). Because this research involved self-appraisal, the data is not necessarily objective nor fully representative of what is happening in schools labeled nongraded; it represents a commentary on the respondents' subjective assessments of present strengths and weaknesses of this instructional organization. The Goodlad-Anderson study school systems were asked to appraise:

a. pupil achievement
b. pupil adjustment
c. pupil's progress
d. classroom atmosphere
e. impact on teachers
f. influence of nongraded program on junior high school
g. impact on curriculum development
h. parent attitudes
i. problems.

They found that answers to their questions were varied and difficult to assess. However, the study did give an impressionistic view of problems related to evaluating ungraded situations. The research problem is complicated by the confounding of instructional material and structural changes in organization of schools, which tend to confuse results attained by students on traditional achievement tests.

A controlled experiment evaluating effects of a nongraded organization on pupil achievement was conducted by Hillson (22, 1965). The purpose of the investigation was to assess the effects of a nongraded program on the reading achievement of a group of elementary school pupils. The experiment extended for a three year period. At the conclusion of the study, the nongraded group exceeded the graded group in three reading tests.

Much of the literature relating to ungraded situations in high schools is of a descriptive type, as evidenced by articles concerning the Melbourne, Florida ungraded high school (8, 1963; 9, 1963; 10, 1963, 11, 1961; 12, 1964; 25, 1962; 36, 1964) and the Middletown, Rhode Island experiment (1, 1962; 32, 1964). Other articles concern the pros and cons of ungradedness in both elementary and secondary school programs (3, 1966; 12, 1964; 15, 1966; 22, 1965; 23, 1962; 27, 1966; 29, 1966).

The major advantages claimed by those who favor the ungraded system are as follows:

(1) Nongradedness offers a solution to the dilemma of whether to promote a pupil who has fallen behind the others in his grade. At the beginning of the new school year, he just continues where he left off the year before.

(2) It relieves pressure -- students seem to experience fewer emotional problems and school administrators are less troubled with behavioral difficulties.

(3) Students compete with their own records rather than with each other.

(4) Certain slow-learning children frequently, given time to cogitate and assimilate, achieve much better.

(5) There is no repetition of material -- students begin each new year where they left off.

(6) The necessity of providing parents with information during the initiation stages of the program opens lines of home-school communication.

(7) The program promotes more teamwork on the part of the faculty.

(8) There is increased teacher awareness of pupil individuality, since individual differences are at the very core of the teaching.

The principal disadvantages, as culled from the literature, seem to be:

(1) The establishment of a nongraded program without curriculum reform is meaningless; grades are simply re-named levels.

(2) Parents do not understand the nongraded arrangement.

(3) It is difficult for some teachers to change their thinking.

(4) Materials for individualized instruction do not exist in all areas. Graded textbooks are the only materials available in many areas of the curriculum.

(5) Teacher absences are a real problem because substitutes are unfamiliar with the system.

(6) Extensive records must be kept for each child.

(7) Nongrading alone does not improve the student's achieve-

ment level; there must be significant differences in the teachers' instructional practices.

Franklin (15, 1966) surveyed the literature and concluded that the minimal amount of empirical research did not statistically establish the effectiveness or the ineffectiveness of the nongraded instructional organization.

Summary

1. School curriculum, teacher role, and teacher training must be considered with grouping practices. Various kinds of grouping can probably be used effectively when they are designed to implement planned variations in content and method.

2. Although the ungraded school has been growing steadily in many parts of the country, there has not been sufficient empirical testing to reach any conclusive results as to whether this plan is any more effective than the graded structure. Much of the literature on the ungraded school consists of descriptive reports based on opinion rather than on controlled research.

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APPENDIX B Interview Forms: First Year

AMHERST EVALUATION PROJECT

Information Concerning Interview Techniques (1966-67)

I. Purpose of Interview Training

A. Interviewee must be able to communicate without distortion.

B. The interviewer must create an atmosphere that will maximize communicativeness of interviewee.

C. Interviewer must be able to communicate information gathered through interview to the researchers in a reliable fashion.

II. Some Statements on Procedure

A. Interviewer should be seen by the interviewee as being permissive and doing an important job.

B. Interviewer should make the interviewee feel that his responses are important even though he may feel they are a typical.

C. Interviewer must be neutral in attitude and demeanor and standardized with other interviewers as well as with himself in procedures.

D. The introduction to the interviewee should cover briefly the purpose of the study, why this interviewee is being interviewed, and that the remarks made will not be connected to him personally in any public document.

III. Using the Questionnaire

A. The questions must be asked just as they appear on the questionnaire. Avoid rewording or paraphrasing.

B. Questions must be asked in the same order as they are presented on the questionnaire in order to have standardized continuity and sequence. When a question is misunderstood or misinterpreted, first repeat the question exactly as it appears in the questionnaire -- and, if you have to, paraphrase cautiously.

C. Learn to use the questionnaire in an informal, easy-going manner without appearing to read too closely the questions printed on the questions printed on the questionnaire.

D. Rapport must be maintained throughout the interview including the introductory statement and concluding remarks.

IV. Use of Probes

A. Probes may be used under the following conditions:

1. When the response is not relevant to the question asked.
2. When a response is not clear.
3. When a response seems incomplete.
4. When a response is suspected of being untrue.

B. There are generally two types of probes: questionnaire probes which are printed on the questionnaire and interviewer probes which are, of course, more delicate, on-the-spot kinds of questions.

C. Interview probes

1. Completion probes -- response was too vague or general to be useful, asked to expand or give more details, i. e., "Anything else?" "Could you tell me more about that?" "Does anything else come to your mind?"

2. Clarity probes -- to explain a response, i. e., "I don't see quite what you mean," "Could you explain that a little more?" "Why is that?" clarify words and semantics.

3. Channel probes -- to uncover or trace back the source of an opinion or define a vague referent. Help you distinguish between an original and an adopted opinion, i. e., "Whom do you mean by 'they'?" "Where have you heard that?" For example:

Resp: "I think grades are harder to get."
Int: "Why do you think that?" (clarity probe)
Resp: "Oh, that's what people say here in school."
Int: "What people do you mean?" (channel probe)

4. Hypothetical probes -- useful but must be carefully done, based on previous response. "The hypothetical situation or event must have been suggested or implied by the respondent himself." i. e.,

Int: "Do you think the library should buy more periodicals?"
Resp: "I don't think so as long as space is limited."
Int: "Well, what if space was not considered?"

5. Reactive probes -- used primarily to elicit affective reactions, i. e., "How do you personally feel about it?"

V. Recording the Responses

A. Record interviewee responses as they are made. Please don't erase. Do not summarize.

B. Record interviewee's own words verbatim. If a long reply, record substance and meaning. Avoid abbreviations and please write clearly.

C. If you probe frequently, make note of it.

D. Non-responses must also be accounted for.

E. Any significant events occurring during the course of the interview should be noted on the backside of the interview form, i. e., lapses of attention, changes of rapport, highly emotional reactions, frequent interruptions.

F. Indicate on the front, right-hand corner of the open-ended interview form whether the open-ended interview was before the written questionnaire by putting the letters "OW". If vice versa, put "WO".

G. Don't record "I don't know" answers too quickly. The interviewee may be just stalling for time. Wait and be patient.

H. Interviewee comments should be specific, not just "It's ok" or "That's good". Follow such responses with a clarity probe.

VI. Suggestions for parent interviews which are starting in November. Many of the same conditions that apply to interviewing students apply to interviewing adults. Some possible statements that might be helpful are as follows:

A. Don't be apologetic about seeking the information.

B. Adults are sometimes more prone to make erroneous assumptions. Watch for these and correct if necessary.

C. Don't say "Are you busy?" or "Would you mind answering some questions?" or "Could you spare a couple of minutes?" Your work is important, legitimate, and you have a right to ask these questions and, of course, he has the right to refuse.

D. You are representing the school system and the University. You are doing important work.

E. Relax, be friendly, pleasant, and at ease. Avoid using professional jargon and pedantic language.

F. After the brief introduction, get to the questions as quickly as possible. They are busy people and so are you.

G. If an interviewee qualifies his reply "to death" attempt to clarigy with a probe or report the qualifications. Repeating the question will often help.

H. The first one-to-five minutes are crucial. Once you get past this, the interview usually goes well.

AMHERST EVALUATION PROJECT

Student Open-Ended Interview Form (1966-67)

Name______________________________ Date______________

School______________________________ Grade______________

Interviewer____

Student No. __________
Phase______________

1. How do you think the teachers feel about the upper phased students as compared with the lower phased students?

2. How do your teachers get you to want to learn?

3. Do you think that you work harder for some teachers and not others? Tell me more about it.

4. How would you describe the tests a teacher gives to different phased students within the same class? (i.e., phases 3 and 4 in math)

5. Why do you think students up or down phase? If you have recently up or down phased, what were your reasons for doing so?

6. What do you think of this whole idea of phasing?

7. How do your parents feel about the nongraded program?

8. How would you describe the groups that "hang around" together here at school?

9. Where do you fit in the social groupings here at school?

10. What does it take to be accepted as a member of the group?

11. What do you think of the library and its facilities?

12. What would you do to make phasing more effective?

13. How do you feel about having students younger or older than you in the same classroom?

14. How do you feel about the present school program in meeting your needs?

15. Do you feel that you have an inward desire to learn? Tell me more about it.

16. What extra curricular activities or hobbies do you participate in, which are connected with the school? How much time do you spend per week on these school connected activities or hobbies? (During or after school)

AMHERST EVALUATION PROJECT

Teacher Interview Form (1966-67)

Name______________________________ Date____________________

School________________________Subject Area or Position___________

Interviewer____

Instructions for Interviewers: This form is designed primarily for teachers. Modification will be necessary for non-teaching personnel. Ask questions as stated. Repeat questions for clarity. Words in parentheses are alternative words which may be used if the question is not understood. Please note the interviewer comments asked for in the final part of this form.

****

1. What determines the content (subject matter of the course(s)) that you are presently teaching?

2. Describe the distribution (variability) of grades you give in various phases.

3. What effects have your grade distributions had on students in different phases?

4. How do the students in various phase levels differ in their ability to understand the course material? (concrete vs. abstract, surface vs. depth, etc.)

5. Why do you think the students move up in their phases?

6. Why do you think the students move down in their phases?

7. What do you do if a student requests a change of phasing?

8. Do you have a preference for teaching at a certain phase level? Why?

9. Does the nongraded structure allow you to individualize instruction? In what way?

10. Do you think that upper phase teachers or lower phase teachers see themselves as a different social group?

11. Have you observed any behavior problems in class? What are they?
    (a) What phase were the students in?
    (b) What did they do?

12. Including all of your present classes, who would you select as the top five students? The bottom five students?

13. Do you think there is a great deal of competition for grades among students in the various phases? Could you explain.

14. How successful do you think you are in getting students in the various phases to work up to their potential?

15. What do you think is the student attitude towards -- Lower phase students (1 and 2 phases)? Upper phase students (4 and 5 phases)?

16. Are your homework assignments different depending upon the phase level of the student? How are they different?

17. Have you found the library and other material resources readily available to you and your students during non-school hours?

18. Do you have many classes in which you have students of different chronological ages? Have any problems arisen because of this?

19. Is there opportunity for students in all phases to participate in extracurricular activities?

20. What responsibility does each student bear in selecting his own educational program?

21. What do you think has been the chief impact on students with the inauguration of the ungraded program?

22. What do you think has been the chief impact on teachers with the inauguration of the ungraded program?

23. How would you differentiate between phases regarding the following categories?

	A	B	C	D	E
Phase	Your Methods of Motivation in and out of class	Degree of Student Self vs. External Motivation	Degree to which Individual Projects Are Used	Difference in Course Material between Phases	Attitude of Student To Teacher
1					
2					
3					
4					
5					
Q					

*Interviewer Note: We are concerned about utilization of experience gained outside of the formal classroom as well as what the teacher does in class.

24. Do you have any additional comments you would like to make about the ungraded program in the Amherst School System?

Interviewer Comments: Please make a brief note below about the tone of the interview, the overall reaction of the interviewee, the frankness with which the interviewee spoke, etc.

AMHERST EVALUATION PROJECT

Parent Interview Form (1966-67)

Name__________________________________ Date____________________

Interviewer____

* *

1. Are you aware of the ungraded program that has been introduced? How would you explain it? How did you learn about it?

2. When your son or daughter talks about school, what does he usually talk about?

3. What has been your reaction to methods of contact with the school, such as report cards, letters, open-houses, personal contacts, etc. ?

4. What do you think of the present form of the report cards?

5. What role do you think tests play in the assignment of grades?

6. Are the grades that your son or daughter receives indicative of what you feel are his capabilities?

7. Could you list some of the school's strong points?

8. Could you list some of the school's weak points?

9. Do you think the school's facilities are adequate for your son or daughter's needs?

10. In English, do you know what phase your son or daughter is in?

11. Who do you think is the biggest help in school when your son or daughter selects a phase?

12. What kind of homework does your son or daughter bring home?

13. What factors do you feel influence your son or daughter to want to do well in school?

    (Interviewer: If the parent is unsure of the question, mention the following questionnaire probes.)

(a) Friends?
(b) Teachers?
(c) The school program?
(d) You - his or her parent?
(e) By his own personal goals?
(f) A long standing interest in a particular subject?

14. What factors do you feel influence your son or daughter not to do well in school?

(Interviewer: If the parent is unsure of the question, mention the following questionnaire probes.)

(a) Friends?
(b) Teachers?
(c) The school program?
(d) You - his or her parent?
(e) By his own personal goals?

15. We would like to hear your ideas. Do you have any comments about what we have been talking about?

Interviewer Comments: Please make a brief note about the tone of the interview, the overall reaction of the interviewee, the frankness with which the interviewee spoke, etc.

APPENDIX C: DATA CARD FORMS (1967-68)

1 - 8 Date Code

1 - 1st 1/2 1st marking period
2 - 2nd " " " "
3 - 1st " 2nd " "
4 - 2nd " " " "
5 - 1st " 3rd " "
6 - 2nd " " " "
7 - 1st " 4th " "
8 - 2nd " " " "

Name ______________________________
Parental Data Sheet

1-5 blank

6-10 I.D. # ______________________ ___/___/___/___/___/

11-12 Card # ______________________ 0/1/

13-20 blank

21 Father's name: ______________________
Occupation: ______________________
D.O.T. classification #: ______________ ___/

22 blank

23 Father's education:
1 - 8 yrs.
2 -12 "
3 -14 "
4 -16 "
5 -16+"
Comments: ______________________
____
____
____
______________________ ___/

24 blank

25 Mother's name: ______________________
Occupation: ______________________
D.O.T. classification #: ______ (0 - housewife) ___/

26 blank

27 Mother's education:
1 - 8 yrs.
2 -12 "
3 -14 "
4 -16 "
5 -16+"
Comments: ______________________
____
____
____
______________________ ___/

28 blank

29 Number of older brothers: 0 1 2 3 4 5(+) ___/

31-35 Older brothers education:
0 - NA ___/
1 - h.s. drop out
2 - h.s. student
3 - h.s. graduate ___/
4 - bus/trade drop out
5 - bus/trade grad ___/
6 - jr. col. drop out
7 - jr. col. graduate ___/
8 - col. drop out
9 - col. graduate ___/

Name: ______________________________
Parental Data Sheet - 2

36 blank

37 Number of older sisters: 0 1 2 3 4 5(+)

38 blank

39-43 Older sisters education: 0 - NA ___/
___/
___/
___/
8 - col. graduate ___/

44 blank

45 Number of younger brothers: 0 1 2 3 4 5(+) ___/

46 blank

47 Number of younger sisters: 0 1 2 3 4 5(+) ___/

48 blank

49-50 Summer activities (1967): ______________________________
____
____
______________________________ ___/___/

51 blank

52 Newspapers: ____________________
____
____
0 - none
1 - local
2 - Springfield, Boston
3 - N. Y. Times, Wall St. Jl, etc. ___/

53 blank

54 Magazines: ____________________
____
____
0 - none
1 - Life, Look, Post, etc.
2 - Time, U. S. News, Newswk., etc. ___/

55 blank

56 Library card? 1 - yes; 2 - no ______________________________
______________________________ ___/

57 blank

Name: ______________________
Parental Data Sheet - 3

58 Parents -- do they know phase: 1 - yes; 2 - no
____
______________________ ___/

59 blank

60 Where do you do homework? ______________________
____
____
______________________ ___/

61 blank

62 What kind of materials (dictionary, etc.) are available at home: ______________________
______________________ ___/
____

C-4

Name: ____________________
Social Activities - twice/year Dec.
Apr.

1-5 blank ___/ / / / /

6-10 I. D. # ____________ 0 /2 /

11-12 Card # ____________ 0/ 3 /

13-20 blank

Friends (5 closest) Phase SES length (1 - this year
2 - last year
3 - before last year)

21-23 ____________ ____ ____ ____ / / /

24 blank

25-27 ____________ ____ ____ ____ / / /

28 blank

29-31 ____________ ____ ____ ____ / / /

32 blank

33-35 ____________ ____ ____ ____ / / /

36 blank

37-39 ____________ ____ ____ ____ / / /

40 blank

Organizations - extracurricular (order of importance)

41-43 ____________ a - orientation / / /
44 blank 1 - academic
45-47 ____________ 2 - school non-academic / / /
48 blank 3 - community
59-51 ____________ b. - attendance / / /
52 blank 1 - regularly
53-55 ____________ 2 - occasionally / / /
56 blank 3 - rarely
57-59 ____________ c. leadership / / /
1 - office
2 - non-office

Name: ______________________________
Warning

1-5 blank

6-10 I. D. # ____________________ __/__/__/__/__/

11-12 Card # ____________________ 0 / 5 /

13-20 blank __/

21 When warning 1 - 8 Date Code

22 blank

23-26 Course number ________________ __/__/__/__/

27 blank

28-29 Principal reason: ________________________
________________________ __/__/
____

30 blank

31 Do you think the warning fair? 1 - yes; 2 - no __/

32 blank

33 Did your parents think the warning fair? 1 - yes; 2 - no __/

34 blank

35 Repeat __/

Name: ______________________

Disciplinary Action

1-5 blank

6-10 I. D. # ______________ ___/__/__/__/__/

11-12 Card # ______________ 0 /6 /

13-20 blank

21 1-8 Date Code ___/

22 blank

23-24 Type of infraction: ______________

____

______________ __/__/

25 blank

26 Administrative Action:

1 - expelled (more than 5 days)
2 - suspended (1-5 days)
3 - spec. susp. from school activities
4 - detention
5 - verbal reprimand ___/

27 blank

28 Do you feel that the action was fair? 1 - yes; 2 - no ___/

29 blank

30 Did your parents think that the action was fair?

0 - no knowledge
1 - yes
2 - no ___/

31 blank

32 Repeat

Name:________________________
Classroom Performance (Misc.)

1-5 blank

6-10 I. D. # ________________ __/__/__/__/__/

11-12 Card number ________________ 0 / 7 /

13-20 blank

21-24 Which class do you like best (#)________________ __/__/__/__/

25 blank

26 Why? Comments: ______________
____
____
____
1 - teacher
2 - subject
3 - it's easy
4 - friends
5 - challenging __/

27 blank

28 How do you feel about having older students in the above mentioned class? Comments: ___
____
____
____
0 - NA
1 - like
2 - don't care
3 - dislike __/

29 blank

30 How do you feel about having younger students in the above mentioned class? Comments: ___
____
____
____
0 - NA
1 - like
2 - don't care
3 - dislike __/

31 blank

32-35 Which class do you like least (#)____________________ __/__/__/__/

36 blank

37 Why? Comments: ____________
____
____
____
1 - too hard
2 - too easy
3 - teacher
4 - subject
5 - no friends __/

38 blank

Name: ____________________

Classroom Performance (Misc.) - 2

39 How do you feel about having older students in the above mentioned class? Comments: ____ 0 - NA

______________________________ 1 - like

______________________________ 2 - don't care

______________________________ 3 - dislike ___/

40 blank

41 How do you feel about having younger students in the above mentioned class? Comments: ____ 0 - NA

______________________________ 2 - like

______________________________ 3 - don't care

______________________________ 4 - dislike ___/

Name: ______________________________
Classroom performance -- 1/marking period
Revised

1-5 blank

6-10 I. D. # ____________________ ___/___/___/___/

11-12 Card # ____________________ 0/8/
13-20 blank

21 1-8 Date Code ___/
22 blank

29-31 Three primary methods of instruction in rank order.
1 - discussion
2 - lecture
3 - read and recite
4 - question and answer
5 - audio visual
6 - group research
7 - experience projects
8 - problem solving
9 - other ____________________ ___/___/___/___/

32 blank

33 Frequency of out of class resource utilization (speakers, trips, etc).
1 - never
2 - 1-2 a year
3 - 3-4 a year
4 - 5+ a year ___/

34 blank

35 Student reaction to methods of instruction (process).
1 - poor
2 - O. K.
3 - good ___/

36 blank

37 Student reaction to course in general (outcome).
1 - poor
2 - O. K.
3 - good ___/

38 blank

39 How frequently are tests and
quizzes given? 0 - not given
________________ 1 - 1/mk. per
________________ 2 - 1/month
________________ 3 - 1/2 wks.
________________ 4 - 1/wk
________________ 5 - 1+/wk __/

40 blank

41 Type of test used most often.
________________ 0 - NA
________________ 1 - objective
________________ 2 - essay
________________ 3 - combination
________________ 4 - oral
________________ 5 - other __/

42 blank

43 How are tests graded? 0 - NA
1 - not gr.
2 - P/F
3 - A-F
4 - No.% __/

44 blank

45 How much do test grades count
in the total term mark?
______________________ 0 - NA
______________________ 1 - not counted
______________________ 2 - don't know
______________________ 3 - 0-25%
______________________ 4 - 25-50%
______________________ 5 - 50-75%
______________________ 6 - 75-100% __/

46 blank

47 Are you conducting an independent
study project in this class?
1 - yes
2 - no __/

C-11

Name: ____________________

Grade Cards -- 1/marking period
Revised

1-5 blank

6-10 I. D. ____________ __/__/__/__/__/

11-12 Card # ____________ 0 / 9 /

13-20 blank

21 marking period: 1 2 3 4 __/

22 blank

23-26 Course # ____________ __/__/__/__/__/__/

27 blank

28 term mark __/

29 exam mark __/

30 semester mark __/

b1-NA
1-F
2-D
3-C
4-B
5-A

31 conductuct: __/
1-excellent
2-average
3-unsatisfactory

32 effort __/
1 - good
2 - fair
3 - poor

34 Is this an accurate assessment of what you are doing? __/
1 - yes
2 - no

35 blank

36 Is this an accurate assessment of what you are capable of doing? __/
1 - yes
2 - no

37 blank

38 Do your parents think this is an accurate assessment of what you are capable of doing? __/
1 - yes
2 - no

39 blank

40 Consistent w/standardized test? __/
1 - yes
2 - no

C-12

Name: ______________________________

Honor Roll-1 per marking period

1-5	blank	
6-10	I. D. # ________________	_/_/_/_/_/
11-12	Card # ________________	1/0/
13-20	blank	
21	1-8 Data Code	_/
22	blank	
23	How did this marking period go? 1 - poor; 2 - fair; 3 - well	_/
24	blank	
25	Did you make the honor roll? 1 - yes; 2 - no	_/
26	blank	
27	Do you think that it's important to be on the honor roll? 1 - yes 2 - no	_/
28	blank	
29	Do your friends think that it's important to be on the honor roll? 1 - yes; 2 - no; 3 - some do, some don't	_/
30	blank	
31	Did you change phase? 1 - yes; 2 - no	_/
32	blank	
33	Did you test out? 1 - yes; 2 - no	_/
34	blank	
35	Did you get any warning cards? 1 - yes; 2 - no	_/
36	blank	
37	If you got warning cards, how many?	_/
38	blank	
39	Did you get into any trouble? 1 - yes; 2 - no	_/

Name: ____________________
Testing Out

1-5	blank		
6-10	I. D. #	____________	__/__/__/__/__/
11-12	Card #	____________	1 / 1 /
13-20	blank		
21	Knowledge of testing out? 1 - yes; 2 - no		__/
22	blank		
23	Has he tested out? 1 - yes; 2 - no		__/
24	blank		
25-28	Course name and number	____________	__/__/__/__/
29	blank		
30	Encouraged? 1 - yes; 2 - no		__/
31	blank		
32	Result grade	1 - F 2 - D 3 - C 4 - B 5 - A	__/
33	blank		
34	Result grade point (32 x 28)		__/__/
35	blank		
36	Special preparation? 1 - yes; 2 - no		__/

Name:______________________________
Phase Change/Course Change

1-5 blank

6-10 I. D. # ______________ __/__/__/__/__/

11-12 Card # ______________ 1/2/

13-20 blank

21 When change (1 - 8 Date Code) __/

22 blank

23-26 Before change course number______________ __/__/__/__/

27 blank

28-31 changed to course number______________ __/__/__/__/

32-33 Reason for change? ______________
____
____
______________ __/__/

34 blank

35 Your decision? 1 - yes; 2 - no __/

36 blank

37 Who was most influential?
1 - teacher
2 - counselor
3 - parents
4 - friends
5 - other __/

38 blank

39 Happy with result? 1 - yes; 2 - no __/

40 blank

41-42 If you are planning to take a course in the same area next year, what phase will you select? 1 2 3 4 5
Is this lower, same or higher than this year's phase?
0 - NA; 1 - lower; 2 - same; 3 - higher __/__/

Name: ______________

Independent Study (i. e., study not
required of all students)

1-5 blank

6-10 I. D. # ______________ ___/___/___/___/___/

11-12 Card # ______________ 1/3/

13-20 blank

21-24 Course name and number______________ ___/___/___/___/

25 Type of Project
Comments:______________
____
____
1 - Quest
2 - Special Class Project
3 - Summer Project
4 - Learning Resource Center ___/

26 Year in which participated:
1 - grade 7
2 - " 8
3 - " 9
4 - " 10
5 - " 11
6 - " 12 ___/

27 Initiated by whom:______________
____
____
____
1 - Student
2 - teacher
3 - parent
4 - group
5 - other ___/

28 Project completed? 1 - yes; 2 - no ___/

29 Activities involved?______________
____
____
____
1 - historical research
2 - contemporary research
3 - experiment
4 - special facilities ___/

30 Student reaction - valuable learning experience? 1 - yes; 2 - no ___/

31 Grade assigned to project:
0 - none
1 - D
2 - C
3 - B
4 - A ___/

32 Grade weight in total grade:
0 - NA
1 - 0-25%
2 - 25-50%
3 - 50-75%
4 - 100% ___/

33 Did the teacher encourage you to complete the project?
1 - yes
2 - no ___/

Name:____________________
Next Year's Course Selections

1-5 blank

6-10 I. D. # ________________ __/__/__/__/__/

11-12 Card # ________________ 1/4/

13-20 blank

21-24 Course name and number____________________ __/__/__/__/

25 blank

26 What is direction of phase selection from the present year's placement in same subject? 0 - NA; 1 - lower; 2 - same; 3 - higher __/

27 blank

Repeat

Name: ______________________
Next Year's Course Selections - 2

63-65 Influential persons other than yourself involved in your total course selection?
1 - friend/peer
2 - other non-relative adult
3 - teacher
4 - counselor /top 3, in rank order ___/___/___/
5 - parent or guardian
6 - relative
7 - principal

66 blank

67-69 Influential factors affecting total course selection
1 - school requirements for graduation
2 - standardized tests
3 - previous marks /top 3, in rank order ___/___/___/
4 - general interests
5 - vocational interests

70 blank

71-73 Influential persons other than yourself involved in your selection of phase levels (see 63-65 above for code) ___/___/___/

74 blank

75-77 Influential factors affecting selection of phase level (see 67-69 above for code) ___/___/___/

Name: ____________________
Homework - per subject

1-5 blank

6-10 I. D. # ____________ _/_/_/_/_/

11-12 Card # ____________ 1/5/

13-20 blank

21-25 Course name and number ____________ _/_/_/_/

26-29 Description of homework
1 - none
2 - textbook reading
3 - outside reading
4 - study questions
5 - essays _/_/_/_/

30 blank

31 Grade assigned
0 - NA
1 - F
2 - D
3 - C
4 - B
5 - A _/

32 blank

33 Time spent (fractional hours per day)
0 - NA
1 - 1-15 minutes
2 - 15-30 minutes
3 - 30-45 minutes
4 - 45-60 minutes
5 - 60+ minutes _/

34 blank

35 Reaction to homework: ____________
____
____
0 - NA
1 - no value
2 - some value some of time
3 - some value most of time
4 - value most of time
5 - usually valuable _/

36 blank

37 Grade weight in total mark
0 - NA
1 - 0-25%
2 - 25-50%
3 - 50-75%
4 - 75-100% _/

APPENDIX D

The material contained in this Appendix is an edited version of two and one-half hours of tape recorded comments made by Dr. Claud Thompson concerning courses of study in social studies.

In that every effort was made to include the most important elements of the original comments, this version is designed to serve two purposes:

(1) It should provide the total report with a reasonably accurate yet readable account of Thompson's remarks.

(2) It should enable interested persons to listen with greater precision to the recordings.

Your table of contents indicates that you're going to use a topical form of organization which I think is very good. On page 1, though, the Introduction leaves me somewhat confused because I notice that it is to cover the chronological period of time from 1865 to the present. I would raise some question about the use of 1865 as the appropriate time to break the American history course into two parts; it's been done for a great many years and for all these years history has been occurring, so that mid-point has been advancing at the rate of about six months every year. Perhaps 1896 would be more realistic at this point.

I like very much the objectives stated in the Introduction.

On page 2, I note in the Overview that you are planning to use The Introduction to the Study of History, by John Good. I understand this experimental unit is part of the Edwin Fenton series, the first unit in fact of The Shaping of Western Society planned for grade ten. I consider this an excellent opening for the study of history.

I think we have a problem here (page 2) with concepts and attitudes. We are dealing basically with generalizations rather than concepts. Most of us consider a concept to be something which can be expressed in one word (freedom, due process, balance of payments, national debt). I might suggest Conceptual Framework for Social Studies in the Wisconsin Schools, published by the Wisconsin Department of Public Instruction (1967).

The short answer test (page 6) looks good to me. I would assume in number 2 you are considering each of the items except the first as an hypothesis, considering the first a fact. Number 3 is a valid question, I think, but it does lay itself open to the very real danger of having these questions as facts to be remembered.

With regard to your objectives: they are true to the Mager system, yet I wonder if we could really properly classify each as behavioral. I'm not sure that being able to list is strictly stated as a behavior. I don't really see a great difference between asking a student to remember something and stating it that way, and asking him to remember something and stating it in behavioral terms. I notice the same thing is basically true for numbers 2, 3, and 4.

I am assuming that on page 10 the procedure which consists of handing out excerpts about the Articles of Confederation and Three Plans of Union to allow students to prepare in class for the discussion would also give them some very definite ideas about what they are to prepare for.

On page 18, we have another kind of situation. This is the concepts and attitudes relative to the Constitution. I think one criticism I would make at this point is the concepts and attitudes that are listed here are not at all parallel to the concepts and attitudes listed for the other units. I think this is more properly a statement of factual knowledge to be gained. Number 8 in the list seems to be a "catch-all." I think I would also suggest a number 9 (the Constitution is provision for change--the amending process).

The specific objectives listed on page 19 are an example of one of the things I was talking about: i. e., changing the wording of knowledge objectives to make them behavioral.

It is true, as you say, that this is to be a reasonably factual unit and certainly with this many facts to be learned the important test will be what you do with these facts in the next unit.

I like very much your suggested activity on the bottom of page 21, the role playing with Hamilton and Jefferson. I think there's a lot of room for this kind of thing in a meaningful history course.

Regarding the unit test on the Constitution on page 23--question 2 (the chart showing the route through which a bill goes in becoming a law) leaves me wondering a little bit. I've seen similar charts and they always include the committees, the pigeon-holing and all the rest, yet very little of this is embodied in the Constitution. I wonder if knowing the mechanics is important to the business of law making and checks and balances, etc.

Moving along to question 4 on the test--the procedure through which the Supreme court reaches the decision on a law--we find the same emphasis on the mechanics of the act.

On page 24 (two interpretations of the Constitution), I wonder if we're really getting to the very important part of the study of the Constitution in history. On the bottom it states that a valuable knowledge objective is that the basis of the first political parties came out of the Hamilton-Jefferson debates. Certainly I think this is true and important. Perhaps we should place a little more attention at this point on the business of starting somewhere with the students' own interests. I think that Dewey was correct when he said that any education, to be meaningful, must start out with some genuine concerns of the learner himself. I wonder if, for example, we could start out by taking a person such as George Wallace and contrasting and comparing his view of the Constitution with that of Hubert Humphrey.

Again, in your specific objectives on page 26, you have a problem because here for the third time there is a list of specific objectives which is not parallel with those listed for other units. Here it appears as if it is an assignment. It is not stated in behavioral terms nor is it stated as a list of knowledges to be gained as in the other two cases.

In the concepts and attitudes listed on page 33, I have a question about both number 1 and number 5. I think on number 1 you've stated one generalization, i.e., the form and substance of the understanding of individual liberties and still another that somehow this is necessary for an understanding of our democratic society. I think that I'd separate the two.

In number 5, I think there's an error here in saying there are certain questions in which you must express your own philosophy. This sentence carries with it a very definite value judgement. This is, of course, a statement of opinion and should be treated as such.

On the schedule of events for this unit on pages 35 and 36, I particularly like the one for the tenth and final day, the paper based on specific objective number 8.

The next unit--on the First Amendment and religion in America-- provides a good example of one of the things that I had mentioned earlier, the possibility of beginning with a problem that is real to the students and then using the factual material instrumentally to resolve the problem or get a better understanding of it.

In the list of concepts and attitudes on page 39, I might ask a question or two without necessarily criticizing the items listed. I wonder if number 3 is really a terribly important thing? Somehow this objective seems to imply, or at least suggest, a criticism of one sort or another of the Catholic Church.

For this unit on the Church and State arguments, I wonder if you have seen or heard of the series that was just issued by the Harvard Social Studies Project, the American Education Publications Company's unit books, The Public Issues Series.

In the concepts and attitudes list for your unit on Involvement in World Affairs Since 1898, I wonder if the Spanish-American War can be called the first significant American overseas naval and military adventure, on the technicality that Cuba and the Philippines are overseas in a physical sense; I suppose this is a correct statement, but is it really significant?

One impression I receive in going through this booklet is that you are not depending on a specific textbook. This is really a very refreshing change.

One of the things I see on the list of specific objectives on page 53 I must comment on. It is number 2, identifying the purpose of Secretary of State Hayes concerning circular letters. I don't think we dare give students ideas that historical interpretations are indeed historical facts. We have to fight this conception on the part of many students and many teachers. I think that an understanding of what history is would forbid that kind of thought to creep into a list of objectives in this particular way.

In the concepts and attitudes for the next unit, The United States in World War I, on page 57 we note number 3 states that "When nations are engaged in a war for their national survival, they may resort to whatever means are necessary to achieve this goal." I wonder if this is truly a concept that we can identify from the social sciences, or if it is an opinion or rationalization that some nations would make.

I think on that same page, by way of seizing on student interest we might take a look at number 5. A lot of people seem to feel that the conflict in Vietnam is the first time that Americans have heatedly disagreed with the conduct of a war or even whether we should be in a war. Perhaps we could begin with Vietnam in studying the situation around World War I.

On page 58 your first specific objective summarizes in a sentence the essential meaning of President Wilson's advice. Should we limit the student to a single sentence?

Your unit on the Versailles Treaty (concepts and attitudes, number 5) contains a statement that you might reconsider. "President Wilson destroying his health in an attempt to gain popular support for the Treaty" is a judgement that few physicians would attempt to make. Physicians have not come to any great agreement on the cause of an apoplectic stroke.

Specific objectives on page 66 raise a question that was brought up earlier, "Will the student, when he studies these objectives, have the materials before him?" I tend to feel that to expect the student to remember these things and do a good job of exhibiting these behaviors would be an impossible thing, for example in numbers 1, 2, 4, 5 and 6, etc.

In a number of the units that I've recently gone through, I've seen under evaluation techniques that the evaluation technique will be individual student participation in class discussion and then a written paper. This raises the question whether a specific question or specific objective can figure as a fairly large part of the student's grade. Hopefully, the student's participation will be evaluated and recorded so that it becomes a part of the student's grade.

I think the overview of the immigration unit (page 74) is masterfully stated. It would be a real joy to sit in and see this unit taught by the person who wrote this overview.

In the concepts and attitudes on page 75, I think generalization number 8 is like one I mentioned earlier--a value judgement which cannot really be justified in this particular position.

In your specific objectives for your unit on the Turner Thesis, you state in number 8 that the student should be able to write a short paragraph in which he states the central thesis of each of the historians. My question at this point is each of what historians? Presumably you mean each of the historians that will be brought into the classroom through printed material, but I don't think this assumption should be left to the reader of the objectives.

Specific objective number 10 is also stated as "specific directions to a student."

Some of the reading for the unit seems a bit steep for students in a phase IV.

One additional thing which might be considered as a resource for this unit might be David Poster's book, The People of Plenty. This is a work by an historian which considers another factor in the shaping of what he calls the American character, and that is abundance.

In your unit, the Struggle for Equality in the Twentieth Century, which is a two week unit, I note that the time span is from 1894 to 1964 (the 1964 date, no doubt, because of the Heath, 1964, New Dimensions in American History series). However, I think on a unit of this sort, you cannot afford not to keep it up to date.

In your concepts and attitudes for your unit on the Negro, number 2 (the standard of living), I think that the level of living for Negroes has increased rather dramatically; not dramatically enough for many of us, but certainly enough so that the statement is somewhat open to question.

Regarding the unit on the Korean War, I would take issue with concepts and attitudes number 6, on page 103. This, again, seems to be a value judgement, one which I don't think we can afford to foist onto our students.

In summing up my reactions to this first study, I could mention a few general points: Briefly, I think that you probably need to come to some agreement with yourself that we have an awful lot of facts here treated as behavioral objectives. I don't think it's terribly disturbing except there is the chance that we may kid ourselves into thinking we have drastically changed our objectives. I looked in vain for any significant number of skills, i. e., the use or ability to do something which requires a skill such as making inferences, analyzing data, all that sort of thing and these are very important objectives for the social studies. They are mentioned in virtually every work I know on the subject of teaching social studies. I might refer you to the 33rd Yearbook for the National Council of Social Studies, called Skill Development in the Social Studies.

Another thing which I mentioned which you call concepts and attitudes is certainly misnamed because I saw very little in the way of concepts or attitudes in the list. Most were generalizations or statements of fact. Again, I think it's a matter of terminology which should not cause you a great deal of difficulty.

There is also some lack of parallelism in the statement of objectives. You sometimes go into first person, sometimes second person, as if you are giving directions to the student.

I think I saw a gradual drift from a large variety of activities in the first few units, some really highly creative, to more and more of what you called class discussion. Class discussion can be very good. I think it has to be carefully spelled out, to be precise as to questions and technique you will use. I also think discussion technique is not an accurate description of what a teacher will do.

I think in the unit there was a great emphasis on non-text materials. I think there is a great deal a teacher can do with non-text materials, particularly if he keeps abreast of newer developments.

Another thing that is apparent is that you've done a fine job of setting forth what it is that you are going to be doing. If I suddenly found myself as a substitute teacher at your school, taking your place I would find that I could do something more than baby sit that day. It goes without saying that your course of study represents a great deal of work and I'm very happy to see that your school is engaged in this project and that you've come up with as much as you have at this point. I think that every course of study is a significant thing, and I also think that it's a truism that curriculum planning is a continuous process and we can never afford to think that we have finished or have "arrived." You have something very good going now and I'm all for keeping it current.

Eighth Grade American History, Phases I and II

The first thing that strikes me in opening up this course of study and reading the general philosophy is that I see a rather deep understanding of the problem of the slow learner, the student who has difficulty in reading and in writing. It is also impressive to see that the concepts and attitudes list for the first unit includes true generalizations from various social science disciplines. I think this is very important as a first step. I would make some quarrel with the idea of calling them concepts because they are indeed generalizations. But I'll talk about generalizations from here on in and I don't think the terminology is nearly as important as the fact that you have some very good ones listed.

The specific objectives also list skills as well as knowledge objectives. I think this is also fine. If anything, the students in phases I and II need basic skills.

As I move through part I, The Age of Exploration, I remain impressed. I would raise just one question, i.e., the reference to specific objectives by the letter on the list. I know that it is a problem to write down the specific objective each time in the form that you have but I also wonder if the teacher, in his day-to-day work, is going to look back when he sees, for example, specific objective j or k to find out what that particular one is.

In your topic ten in the first unit, you speak of having the class come to conclusions orally. I should think that asking them to make some generalizations and then providing some time to test these generalizations or at least subject them to the scrutiny of the rest of the class might be an extremely worthwhile activity.

In topic 13, you are reviewing orally the ideas of history comparing them with the large recording sheet that you made earlier for topic two. I think this is an excellent evaluation.

In the section on evaluation for this first unit, the first part of the course, I am very impressed with the statement you've made about the way you will conduct the evaluation, not only the business of keeping a record of the students' ability to meet objectives when success is achieved but also the fact that the most successful device to use for such teaching is additional material on the same subject to see if students can transfer their skills to new material.

My comments on this course of study are very brief, basically because I can't find very much wrong with it. I am very much impressed with the understanding shown in this particular course of study. I am concerned about grouping in general and most particular the matter of having five different ability levels. While I think that this is an outstanding unit for phase I and II students, I would wonder if any school system can, with any reasonable guarantee of preciseness, separate its students into these groups. I think that your planning is appropriate to the situations you have.

Eighth Grade American History phases III, IV and V

I note that the central core of all three of these courses of study will be the Discovering American History. This is one of the newer books and I think a fairly significant work in the "new" social studies, stressing the discovery, inquiry inductive approach.

I note also that the subject matter is basically the same in all three levels, but then as we get beyond that we find the expectations are different for the students at the different levels. The first example seen, of course, is page 3 where phase III people simply cover material, or the themes that are listed and write papers on the three that have asterisks. I think it is quite realistic to make the provision that you have here that phase IV people should combine their own conclusions on the topics into their own written interpretations of the period and then also to set for phase V people a more ambitious thing, which culminates at the end of the year, with their own final interpretations of history. It might be a bit presumptuous for or perhaps overoptimistic to expect even the phase V people to come out with their own interpretations of American history.

Regarding unit 2 (the concepts and attitudes on page 4 in all three of the booklets), I notice that you have a list of a group of things beginning with "What is revolution?" I think these are good themes. I would still hope that one way or another you would identify certain concepts or generalizations which would need to be brought to the students' attention. I think that there is a rather sharp difference between themes and concepts and likewise between concepts and generalizations.

There seems to be a pattern emerging in each of the units for phases III, IV, and V whereby we find that at the end of each unit the students in phase IV are to do some more interpreting from the materials they have and the students in phase V are to do still more interpreting. I can't help but raise the question as to whether this can be done successfully unit after unit after unit.

For phase III students, I notice that there is another difference--that is, that the material ends with unit 6 rather than unit 9. I'm quite at a loss to understand the logic behind this. I'm not sure quite why it is that more recent American history should be studied by the more able students and the less able students should be content with history which is farther back in the past. If we did have to make a choice of this sort I would say that it should perhaps be made the other way around, although that doesn't come close to defending such a choice either.

The section on materials (page 15 in the phase III booklet and 20 in the phase IV and V booklet) raises another question or two regarding the way a student may be directed toward additional material. None of this is spelled out. It would seem to me appropriate for the teacher who is doing the planning ahead to indicate certain materials that are available and to indicate certain ways in which they would be used. Up to this point we see only that the suggestions found in the teacher's manual for Discovering American History would be the only source of guidance for the teacher. The teacher would have to be very concerned with ways in which he could "plug in" additional materials to the period of time being studied. I see no indication of this on the materials page here. I think this is a rather serious problem in this series of courses of study.

In the evaluation section (page 21 of four and five phases and 16 of phase three), we have a similar problem of reliance on the Counselor and Frizell text, perhaps too much so. I think if tests from a test booklet become the only written tests that students take, they themselves are going to get the idea that "getting what's in the book" is the intent of the course.

Basically I think in summarizing the eighth grade American history course that it recognizes a new and fairly significant advancement in social studies education. I think people are beginning to recognize that local planning groups can seldom produce something which is as masterfully organized as the kind of thing a group puts out when it has highly paid consultants from all levels who work full time for a number of years to develop the material. Yet I think there is also an element of depersonalization here and also a danger or two. The element of depersonalization runs as the teacher begins to accept blindly what is going on. The danger that I would point out is the danger that the teacher will fairly systematically ignore new material.

World Geography and Civics phase III

I have a few comments on page 4, the overview. I notice that you say the entire course is divided into two subjects, geography and civics and that the world geography would be about half. I notice in totaling up the weeks that you have considerably more than half of the time allotted. You do mention that certain units can be left out and that students can do additional units but I'm wondering really how one would decide which units can be left out. This particular material is necessary and worth doing so we have to be very careful of just chopping certain parts out for lack of time. I notice that the pace of the course is geared very closely to the textbook (John Hodgin Bradley's World Geography) and that the civics course for phase III has fewer than the number of weeks in one semester. Perhaps what you need to do is let the geography take a bit more than one semester and the civics course a bit less.

I should also be very interested in the grade level at which this particular course is to take place. Noting that grade 7 has a rather extensive treatment of physical geography, if the same students would take that course and this there might be some repetition that would provide some of the answers you might need for shortening the course or changing its direction.

I get the idea that this overview, although nicely written, is not quite in harmony with the criterion of the Amherst Evaluation Project. The overview should be about the subject matter you will use in the unit. Here you have indicated ways in which the student's achievement will be evaluated, and other procedural things.

In reading your introduction on page 2, I see that some of my comments about the overview are not necessary. I think you have very nicely given an overview of the content.

I also like the concepts and attitudes that you have listed on page 3.

Just a few comments on the teaching methods on page 4. I see that you are straying from teaching methods and getting into something that a student will do. I wonder also if this list is comprehensive enough to meet the specific aims that you have listed on page 4.

The test I think is basically well constructed, although I see a number of questions which require only recall. Some of the questions get a little bit technical.

On page 7 under evaluation techniques, I notice you have a test to determine whether students understand differences between physical, political maps and climatic vegetation maps. I think with the rather large number of specific objectives for this chapter you would want a bit more on a test.

I think that the problem with a number of tests you have here is that they, like the specific objectives, are very heavily, factually oriented. I think that this points out another problem that you have here and that is you have chapters within a unit and there are only two units in this entire course of study. I think that you could add concepts and attitudes for these things you are calling chapters and make them true units. I see very little to indicate that unit I is indeed a unit. I think it's a collection of units.

I notice also that you have made a unit called "Man and the Land Surface" which runs only three weeks. This seems like something of a disproportionate allocation of time.

On page 23, the concepts and attitude for unit II raises a question. I think that "A" and "C" are certainly simple statements of fact. "D" is a rather important generalization and the proper way to reach this is of course through discovery. If I were to look at the unit as a whole, I think that I would mention that it is quite carefully worked out as statements of specific objectives and statements of evaluation materials are concerned.

I think that the objectives could be expanded, however, to include things other than simple acquisition of factual content. There is really a great deal in the study of geography besides study of factual content. There are a good many concepts and generalizations which can, and I think should be, discovered by the student. How well he discovers them depends on how well the teacher conducts class discussion. This requires dialogue, probing, work on reflective thinking as well as simple discussion.

I think another problem is the fact that you have organized the course by chapters in the book which seems to indicate more close following of the book, almost to the point of letting the book be the course. I think that you might wish to consider changing many of the things that you have listed as chapters into units themselves, listing certain concepts and generalizations to be gained within those units, rather than having just two units which don't seem to represent logical divisions.

Civics, Phase III

It is my understanding that this course of study is, in a sense, a continuation of Geography and Civics, Phase III by the same author. It appears as if many of the same comments will apply

I see the overview, again, is pretty much astatement of the organization of the course.

In the concepts and attitudes on page 2, one might raise a question about item "B," "free men are responsible men." I think that this in one way or another implies a value judgement. Item "C" also perhaps is a bit chauvinistic.

On page 4, I very much like the teaching method number 2, dealing with the teacher stimulating discussion of what is truth and what is the difference between opinion and fact. The first is a very important philosophical distinction for students to make. The second, of course, is a very important skill that they need to develop. Perhaps it should be stated as a specific objective for the course. The teaching methods under 1 on page 5 are creative, as are numbers 2 and 3 on page 6.

On the concepts and attitudes for unit II on page 11, I note an inconsistency that we have to deal with. A, B, C, D, and E are all generalizations which a student might be expected to get, although E might have a value component. F and G might be considered to be teacher's aims. H is an understanding, and it is not stated as a complete sentence.

If I were to comment critically about unit II, it would be roughly this: that the emphasis of all of the study of the Constitution and workings of government seems to be on mechanics. We seem to know the official steps by which a bill becomes a law, but we don't know much about the actual things that happen, the power considerations, the political considerations, the distribution of power among citizens and lobbies, the workings of things like fillibusters and other tactics such as bargains and compromises. I think that if we want a realistic idea of how government works, we have to consider these things rather than the mere machinery. I don't think really that studying the Constitution and statements about it tells us a great deal about how the government actually operates. If you're thinking in terms of some revision at a later date, I might suggest some consideration of the above.

Modern Problems, Phase III

I am assuming from the page numbers in this booklet that this is a continuation from an earlier booklet which was not sent to me.

In the introduction to the unit on Massachusetts government, a couple of thoughts come to mind. I notice in paragraph three, you are stating that there will be a two week unit on Massachusetts government. In paragraph four, you mention that the emphasis is placed on the operative structure of the state government, with some attention paid to the philosophical principles on which it is founded.

One of the courses of study is Civics for Phase III, which includes a great deal of work on the working of state and national government. I think in this sense it may be a repetition. You go on further to state that the reasons for the emphasis on the operative structure rests on a conviction that phase III students are more interested in the practical and applicable aspects of knowledge rather than the philosophical and abstract. I don't know really if this is quite true. I think that sometimes we can get tangled up in actual operations and find that we have given the students something that they neither understand thoroughly nor remember well at all. I get the impression that phase III students are really the quite average students and I think that the average student can do some pretty good thinking about some of the abstract questions that people raise when they are talking about government, the rights of people and the source of power for government.

In the next paragraph, I don't think that anyone can criticize your justifiable pride in Massachusetts constitution. I don't know if I would link this particular justification with the charges of corruption and inefficiency in Massachusetts. In one case, you're talking about the Constitution as being a good thing and in another case you're talking about people who operate a government.

That No. 3, page 48, the Constitution of 1780 is a masterpiece of scholarship and statecraft is attested by the fact that we are still governed by the original law. However, this seems just a bit incompatible with the statement in the introduction that you need to use a synopsis of the entire Massachusetts constitution because the document is so amended and cross referenced that it would produce utter confusion. The much more important point is simply this: Can you, by studying objective material, come along with concepts and understandings that are so heavily laden with a value component?

On page 49, on concepts and understandings number 1 is not quite consistent with the others in this or other courses of study. The Amherst Curriculum Evaluation Project states that the concepts and attitudes or properly generalizations as they have been stated are broad ideas which students should develop and grasp and continue to remember throughout his life. I don't think that understanding what one will see in the House of Representatives requires a knowledge of legislative procedure or is really something that the student will remember for the rest of his life.

I think the introduction to the unit on comparative isms is quite well written.

On page 51, unit I on socialism, I quite agree with you that it is important for people to learn as much as they can about the various isms in the world. The concepts and understandings, again, are not quite parallel in the consistency of kinds of expression. I also wonder a little bit about numbers 4 and 5 which might be considered by some conservative elements in your community as very much pro socialism.

I believe that one of the criterion set forth by the Amherst Evaluation Project is to state the number of weeks that each unit is to take. I don't think at this point I've seen that listed. I think also the specific objectives should begin with a statement such as "The student should be able to:". Then I think your specific objectives would be completions of that particular sentence and would be compatible with Mager's system.

I think again in the unit on fascism on page 53, the concepts and understandings are actually attitudes which are not really derivable from scholarly study. These could be reworded and changed. I think also that you might consider some of the specific objectives as understandings.

Just a word about the concepts and understandings for unit 3 on Communism (page 55). This is the third of the three isms you've talked about so far: socialism, fascism and communism. I think that scholarly detachment is a relatively important thing to have here. The detachment is evident in the units on socialism and communism but falls by the wayside entirely with fascism. I would suggest, at this point, a remodeling of the concepts and understandings area, perhaps looking at some of the works that have come out in recent years concerning concepts and generalizations from certain social science disciplines. I think that a good place to start might be Social Science Education's Consortium book on Concepts Structure in the New Social Sciences.

I like the introduction to social problems between pages 59 and 60 as well as the overview for unit I personality on page 60.

For unit I, Personality (p. 61), specific objectives number 1 is "To differentiate between sex typing and anger anxiety conflicts as applicable to learning situations of a small child." Does not this seem a bit abstract for the same students whom you were discussing at the beginning of the booklet as being much more interested in the practical aspects of government than the abstractions?

I'm wondering also about the apparent inconsistency of specific objective 7. Does this imply that some of these terms are more important?

Again (page 63) we have rather extreme example of lack of parallelism in stating concepts or generalizations.

The unit on Alcoholism's overview (p. 66) looks good. The last sentence, "Then the student can make his own decision to drink or not to drink based on good, sound, factual evidence," presents a problem. All actions have more than one component. They have a component of factual perception, how a student perceives what is, and how using evidence and good logical thinking can he decide what he is going to do (a value component). I think to be worded properly this statement should be changed to say that the student "Can make his own decision to drink or not to drink based upon factual evidence coupled with his own value system. Without this value component, no one can engage in any action.

Under concepts and understandings, somehow number 5 (page 66) appears to be a rather trite expression even though it is a truism.

I think the overview for unit 4, Crime, Juvenile and Adult, page 69 is very nicely written.

Under concepts and understandings on the same page, I think number 4 is trite. It may involve a value judgement. I think the same applies for number 6 and numbers 8 and 9.

In summing up, I think that the comments I've made relative to the concepts and understandings probably are the most important part of my reactions to this course of study. I see a rather interesting change between the one section of government and the other section on problems. I think that there is a very different frame of reference here -- one on mechanistic learning of facts and the other a great deal of analysis, questioning, probing, and so on. Your students should be much more motivated during the second part of the course.

I do think that if you reorganize this, the concepts and understandings should be better understood as generalizations and worded so they are compatible. I would also think that in your specific objectives you'll want to give some attention to individual skills as well as knowledge objectives.

Ancient History, phases IV & V

As I look at the Table of Contents and Overview on the first couple of pages, one minor point presents itself. The last unit (unit 6, The Middle Ages) is being planned for the entire second half of the year. This would seem like something of a breakdown of the unit plan system. I'm rather wondering if medieval history can be taken care of in one unit when you have five units for the first semester.

The list of readings for the first semester is, I think, exceptionally comprehensive.

In your list of concepts for unit 1, the Stone Age Man, I notice the first one deserves some comment. "We are indebted to men of the stone ages," is a rather vague, fairly dogmatic statement which appears all the more so by failing to state in just what ways we are indebted to men of the stone ages.

I would raise the minor point of concept 5, which is stated as a question. I wonder if we really can say that concepts which, according to the criteria set up for your project, are to be developed and/or grasped during a unit. I think to develop or grasp an attitude involves an element of discovery. Stating it as a question seems to evade the general idea.

While we're on the subject of concepts, I think we should perhaps clear up the fact that most of the courses of study in your project are calling concepts what are, in effect, generalizations. That doesn't mean they are any the less useful, but they are generalizations. In general usage the term concept refers to a word or phrase or some term, a generalization is usually a statement of a relationship between or among two or more concepts.

On the following page I see a quite good list of teaching methods and materials. There is a question about the reading assignment. I am assuming in the process of giving an assignment of this sort, the student would be directed to certain problems so that the text can be looked upon as a source of materials that have some use.

In the list of concepts or generalizations for unit 2, there are a number of questions I have to illustrate some things I think could be changed in the concepts. Number 5 is not necessarily a valid concept to be gained. It may or may not be true, it's hardly what scholars would agree upon. I think we find some other statements (numbers 8 and 11) that seem to border on the area of the value judgement and still not be quite there.

On the specific goals on this page, I note that although they are stated in behavioral terms as Mager would insist, they are very much oriented toward acquisition of factual material. I think that the factual material will and should come but I see an absence of a student demonstrating certain skills.

There are a few examples of lack of parallelism in statements or lack of precision in stated materials. I'm thinking, for example, of number 10 in the previously mentioned unit of specific goals. Number 10 has a list behind it which states "after completing a study of pages 91 through 107 the student should be able to..." and then under that items G and H do not follow as parts of that sentence.

In the list of generalizations for unit 3, Ancient Greece and the Aegean World, I see number 6 seems a bit chauvinistic in its tone. It is certainly an opinion rather than a scholarly judgement. One could make the same comment in a bit milder form for number 9.

Specific outcomes, 13 and 14, have the problem of a lack of consistency within the sentence itself.

I notice in each of the units I've gone through so far we see that the specific goals are stated in terms of pages read in the text. I think this perhaps inadvertently but significantly here gives the impression that the specific aims are gained from the reading of the text alone. I think that since you have a number of other teaching methods or procedures listed, aims are met through them also. I think this is a fundamental problem with the aims you have. They are tied most directly to the textbook.

In the specific goals for unit 4, I see we don't have the same problem showing itself. Often the last letter or two under each number are not quite compatible, at least grammatically, with the other items. This would almost suggest that they weren't written at the same time or by the same person.

Under teaching methods (item C, unit 4), I notice the first item is the same for unit 3 except for films and filmstrips, color pictures and transparencies used. This way of listing it has a number of disadvantages, the first being that one would have to turn back to unit 3 in order to see quite what is meant here.

In unit 5, China and India, under specific goals you have the same problem -- lack of consistency with a number of items.

On the page near the back of the booklet called Selected Readings in History, Table of Contents, I'm not quite sure whether these are readings in a particular book or what.

Just a few questions about the phase V requirements. It appears in looking at this that the V phase students would have roughly the same experiences as the students in phase IV with the exception that those in V will have to complete two or three projects. I think that in section C you have some creative questions. However, I notice for the unit on Ancient

Greece and Ancient Rome you have just one choice. I wonder if we really need to ask all students to do the same topic.

For the title Christianity, which I don't believe is a unit, you have several things. I'm not sure under what unit they would do this assignment.

As far as the Middle Ages goes, you've rather well taken care of it here.

I wonder about providing for individual differences of this sort in these particular ways. We note that the phase V student does a term paper. I wonder if we're really trying to provide something different for the students on the basis of their abilities if we should be doing the same thing all the way along and then require something additional for the students of greater ability.

Summing up this course of study, I think it's obvious that you've put in a great deal of work and the objectives really have been quite carefully isolated for each of the units. I think this represents a rather strong step. I think one problem with these isolated objectives is that they tend to stress the text, at times almost to the exclusion of skills.

I think discovery of generalizations which have been listed as concepts could be listed in behavioral terms also.

A minor point in your unit, the lack of page numbers, made it somewhat difficult to follow, particularly when you were referring the reader back.

Speaking of the teaching techniques and the materials, very often we can say teaching techniques will consist of lectures, group discussions, etc. but we aren't really putting much creativity in this. We need to spell out the kinds of activities which will take place.

Just a word or two about the concepts that you had listed. You recall that I took issue with some on the basis of moral judgements, etc. Actually I think that we have to establish why I'm making this objection. A generalization of this sort has to be looked at in terms of how it is arrived at. If a statement is told to the student, it is not a generalization but rather a statement of fact to be learned and probably comes across just this way. We do know from learning theory that people do not generally change their behavior or even their outlook as a result of facts that are given them. We do know also, that a generalization, if it is a generalization, arrives as a part of a person's thinking through a process called induction or discovery. A person will not discover a moral judgement. He will discover certain relationships between causes and effect and he will make moral judgements in terms of his own value framework.

Geography of Eurasia, phase III, grade 7
Unit I, Basic Concepts and Vocabulary of Geography

I note from the table of contents that the course of study is not complete and we're doing just one unit. I think you will want to indicate on this unit the amount of time that is to be occupied in the school year.

I very much like the overview of the content. I think that it states what you are trying to do in a very concise, well organized manner. I can't help but think that the list of concepts and attitudes on page 3 seem quite ambitious for a unit described in the overview as it is. The first few perhaps do not belong to this particular unit.

In a statement of specific objectives beginning page 4, I notice that the objectives tend to be very heavily loaded toward content with some skills thrown in. Somehow I have a very hard time seeing how students could be challenged to do this amount of memory work. It seems to me very much of the exercise in memory rather than anything that contributes to an understanding of geography.

I think number 12, page 5, would fall into roughly the same category as would item 17.

Strictly speaking, item 21 is an objective to be reached in other units. I don't think they can do the transferring until they get to other units.

I rather like the qualifications that you have attached to the teaching method of the lecture on page 7. I don't think this can be overstressed that seventh graders have somewhat limited attention spans and that the short lectures using overhead projecturals and other devices will facilitate note taking and understanding.

You have a very nice reading list and I think it is basically very up-to-date and comprehensive. The acid test will be the extent to which and the manner in which you use these things in the actual conduct of the unit.

I had a question concerning the testing as described on page 9. These terms appear on the same list on the students' pages (page A 1). The list stresses as a test mere memorization. I don't think the test would test an understanding of geography as the teacher might like.

Your student page A 2 is one of the most creative ways I've seen to demonstrate the necessity for and the manner in which we locate places on a globe. I think the student material is quite creatively put together. One question I've noted is whether it indeed does include the test the students will be given. If it does, and this is material the students will have in their hands before being evaluated, it would place a very high premium on mere memory as a process.

I like the crossword puzzle on page A 25. Generally I think in this introductory unit you've made a very good start and hopefully the other units will be as creatively put together.

If there is an area in which I might suggest more work it is in stating aims in areas other than memory of material. I think that since you are developing many geographic skills and understandings you might want to state some of them as definite outcomes.

APPENDIX E: CASE STUDIES

Class of 1973, Phases I-II ABBY
7th year

Abby was somewhat shy and reserved. Although her smile appeared to be caused by nervousness, her cooperation and sincerity in answering the questions left nothing to be desired. For example, she not only explained why she liked one subject over the others, she also explained how this liking originated. Her appearance was neat.

Generally, Abby is a lower phase student. She is phase II in math, social studies, and science and phase I in English and reading. First term she earned A's in English and Reading and B's in her other courses. Second term only one grade changed: she dropped from A to C in English. Her conduct and effort fluctuated a good deal as indicated by the eight 2's she received for the two terms, as indicated in Table I.

Abby's father is a construction worker and her mother is a housewife, and both are high school graduates. The family has moved often. In fact, they have just moved to a nearby community and Abby no longer attends Amherst Junior High. The family is placed in the fourth socio-economic category. Abby has three older sisters, two married and one in high school, and also a younger sister.

Abby is in good physical health. She weighs about 130 pounds and is five feet tall.

Abby seems happy with school. "School is a bit more fun this year than last. I especially enjoy meeting my friends here." She also mentions that the phasing program is good "because I now can work at my own ability. I enjoy it (school) much more than last year when I had to struggle to get a C with the brighter students."

Because Abby left the Amherst school system before she selected courses for next year, there is no way to know what plans she had for the eighth year. She did mention that she wants to graduate from high school, but she said she is not sure whether she would want to go to college. She also said, "I'd probably like to be a policewoman some day, but this might pass with time." Abby indicated a strong desire to get married and have children "like my older sister."

Since Abby is in her seventh year, all courses and phases were selected for her. On the other hand, her tentative plans of becoming a policewoman are her invention. The plan of getting married was the influence of her older sister on the West Coast whom she admires a great deal. Analyzing of her standardized test scores, which are rather low, indicates that she might have trouble achieving her goal of becoming a policewoman. On the Metropolitan Achievement Tests in the sixth year, she scored no higher than the 37th percentile and that was in study skills. In the seventh year on these tests, her highest score was the 33rd percentile for the Language Study Skills. Her lowest percentile was a three in arithmetic Computation. Also on the Lorge Thorndike IQ Test, she scored lower than the 50th percentile on both the Verbal and Math sections. Please see Table III.

Abby's grade records go back only to the sixth year due to her family's move to Amherst. She did average work: Language, both oral and written; math; spelling, formal; science and social studies were subjects in which she earned a C. The only D was in spelling, applied. She earned B's in reading, French, music, art, physical education and penmanship. For her current grades refer to Table I.

Abby enjoys reading the best because she likes to read novels and "other interesting books." She also likes her teacher. On the other hand, English is her least liked subject because it "is boring, the teacher doesn't make it interesting."

There was one grade change which seems important. Abby went from an A in English first term to a C second term. When questioned about the change she said "I fooled around and didn't do as good." Her conduct dropped from a 1 to a 2, while her effort improved from a 2 to a 1.

Abby has no homework in Reading or English. In science she feels that "it is nothing but busy work, and it has some value some of the time." "The homework in math is good, because I like to study the questions for homework." Finally she thinks that her homework for social studies is most valuable because "here, like math, there are study questions which I enjoy."

Abby takes part in no extracurricular activities in school. She is a member of the Girl Scouts. Her spare time activities include swimming, watching television, and playing records. She enjoys playing football and softball with the boys, helping her mother do housework and playing with her younger sister. Abby's friends are generally in a higher socio-economic bracket--three of her friends are in the second socio-economic category. Most of these friends are in the second phase like Abby, however.

Abby has received no warning cards this year but she did serve detention at the beginning of the first term for "fooling around in class." She did not think the action was fair but her parents did. Abby, however, was in no other conflicts either in school or in the community.

Teachers remark that Abby "tries hard and is very conscientious about doing her assignments to the best of her ability." One feels that "she is slow in reading; she is slow to grasp concepts; her attention span is short." Although, as indicated above, she is doing well in reading and English, Abby is in phase I in both of these subjects. Her standardized test scores also support the teachers' remarks, in that she is an average student, who has certain difficulties, such as paying attention in class.

Although Abby is a lower phase student, without the phasing system she would be performing at an even lower level. Abby's own remarks verify this belief for she states that "I now can work at my own ability." She admits that phasing helps her perform at a level commensurate with her ability. The phasing program has definitely helped Abby gain a greater degree of satisfaction from school.

ABBY

TABLE I

Term	Course														
	English I			Math II			Soc. Stud II			Science II			Reading I		
	*G	C	E												
1st	A	1	2	B	2	1	B	1	2	B	1	1	A	1	2
2nd	C	2	1	B	2	2	B	1	2	B	1	1	A	1	1
3rd															
4th															
Final															

* G: grade
C: conduct
E: effort

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TABLE II

Methods of instruction in order of frequency

English Phase I	Math Phase II	Social Studies Ph II	Science Phase II	Reading Phase II
read & write discussion audio visual	problem solving question & answer discussion	audio visual experience project discussion	question & answer audio visual group research	read & write question & answer discussion
	General Comments			
The way the teacher teaches is boring. It's poor.	The method of teaching is the normal way to teach math; it's pretty good.	I like this method because I enjoy this subject.	She thinks that this purpose is good and that it has purpose all the time.	It has purpose all of the time, because I learn a lot by reading out loud.

ABBY

TABLE III

Test Name	Date	SS	%ile	Norms
Lorge Thorndike	10/3/61	97		Nat'l
Lorge Thorndike	1/18/67	U - 94 NV - 98		
Metro Word K	5/67		18 %ile	"
Reading	"		22 %ile	"
Spelling	"		21 %ile	"
Language	"		11 %ile	"
Lang St. Skills	"		25 %ile	"
Arith. Comp.	"		27 %ile	"
Arith, Prob. Solv.	"		18 %ile	"
Social Studies Info	"		24 %ile	"
S. S. Study Skill	"		37 %ile	"
Science	"		26 %ile	"
Metro Word K	12/67		86 %ile	"
Read			92 %ile	"
Spell			73 %ile	"
Language			85 %ile	"
Lang St. Skills			85 %ile	"
Arith Comp.			56 %ile	"
Arith Prob Solv			94 %ile	"
S. Studies Info			80 %ile	"
S. Studies Skills			92 %ile	"
Science			80 %ile	"

Class of 1973, Phase II
7th year

CATHY

Cathy is a personable girl, possessing a high degree of poise for a twelve-year-old. She readily understood the stated purpose of the survey, and expressed herself as quite happy to participate. All interviews with her were pleasant, informative, and accomplished efficiently, due to Cathy's cooperation.

Cathy is in her seventh year of school and has achieved a mixed record at a phase II level. She appears to be an average test performer, according to standardized test results and has achieved a grade spread of approximately equal numbers of A's, B's, and C's.

Cathy is the younger of two children; she has an older brother in college. Her father, a college graduate, works in a supervisory capacity. Her mother is a housewife and has graduated from high school. Local newspapers are read in the home. Cathy has a library card which she does not use often but which her mother frequently does. Cathy does her homework in her own room, using a dictionary and a minor encyclopedia for reference. Her family is aware of her phase level.

Cathy has had a routinely healthy life, the usual childhood diseases, and the standard immunizations. She is about five feet tall and weighs approximately 95 pounds.

Cathy had some understanding of what information would be of value to the study. Probing was generally unnecessary since she volunteered to amplify her responses. She has a ready sense of humor, exhibits mature social conduct, and appears to be a happy, well-integrated young person.

Cathy has formulated no vocational plans. Her educational plans extend only to high school graduation. She does not think she has the ability to handle college curriculum or to get into and through college. Cathy would appear to have a reasonable amount of confidence in achieving her goals.

Cathy has relied on her parents, counselor, and teachers for planning advice. Her course selections and phase levels have been affected by school requirements, previous marks, and genral interests. Standardized test results are compatible with her goals.

As stated earlier, Cathy's grades have been spread over an A to C continuum. In her fifth and sixth years she consistently earned C's in math and science. In the current year, she improved her grades, earning A's in reading and science, B's in social studies and English, and C in math. Cathy has been described as slow but steady, one who tries very hard, yet one who lacks self-confidence. Her improvement in the current year may be attributable to her low phase choices, which have removed her from competition with brighter students.

Cathy states a preference for English because of the teacher who, Cathy says, always answers questions promptly and fully. The subject she likes least is social studies, because of the teacher. She says, "I don't like the teacher -- he thinks he's perfect."

Cathy

Since her fifth year there has been little inter-term fluctuation in Cathy's grades. Cathy conducted no independent study this year. Asked why not, she replied "I guess I'm just too lazy." Moreover, she felt her grades reflected the amount of work she had done. She felt she could improve her math grade with more work. She had no preference for either letter or numerical grading systems. Generally speaking, Cathy does not like homework. In math, she is assigned problems; in social studies, some reading; in English and science there is no homework.

After the first term, Cathy rated all teaching methods to which she had been exposed as "good." Her opinion varied only slightly as the year progressed.

Cathy has a fairly broad record of test results available. In grades one, three, six and seven she scored IQ's of 115, 118, 91, and 105 respectively. The first three scores were obtained from Lorge-Thorndike instruments, the fourth from an Otis QS (Beta). She scored a mean grade level of 3.7 on the Iowa Test of Basic Skills during October of her fourth year; she scored a mean grade level of 6.4 on the MAT (B) during May of her sixth year; and a mean of 6.3 on the MAT (A) during December of her seventh year. Cathy scores close to the national norms ascribed to the several measures.

Cathy chose phase II for all her courses this year and extended that choice to similar phases for her eighth year courses. Although her parents would prefer that she be in phase III they accept phase II and tell her "to try her best." Apologetically, Cathy explained her choice of phase II, "I'm not very smart."

Cathy is affiliated with no formal activities or organizations outside of school. Three girls in phase II and two in phase III are her closest friends. Two are friendships made this year while the others are of several years' duration.

Teacher comments throughout Cathy's seven years in the Amherst school system indicate that she has lacked self-confidence. She has been a well-liked child, with comments such as "sweet, unassuming, placid, a nice girl" occurring throughout her record. Teachers write that she "tried very hard" and was a "slow but steady worker." Parent-teacher conference reports reveal that her parents were always willing to cooperate with the school in attempting to improve Cathy's work and/or to build up her self-confidence.

Cathy was a good participant in the survey -- articulate, informative, cooperative. She has been well-liked by her teachers. Although Cathy would seem to have arrived at a realistic appraisal of her abilities and to have chosen her phases and curriculum accordingly, she might succeed at a phase III level as her test achievement close to national norms would seem to indicate. This conclusion is supported further by the fact that she has improved her grades while not required to put forth much effort in her phases. Her parents have apparently played a passive role in phase selection, although they are willing and cooperative in all contacts with school officials. Conversation with her counselor also indicates Cathy's phase choices are accepted in lieu of motivating Cathy to attempt a higher level. She has obviously achieved a large measure of social maturity.

CATHY

TABLE I

Term	Course														
	English Phase II			Math Phase II			Science Phase II			Soc. St. Phase II			Reading Phase II		
	*G	C	E												
1st	B			C			B			A			A		
2nd	B			C			A			B			A		
3rd	B	1	1	B	1	1	A	1	1	C	1	1	A	1	1
4th															
Final	B			C			A			B			A		

* G: grade
C: conduct
E: effort

TABLE II

Methods of instruction in order of frequency

English Phase II	Math Phase II	Science Phase II	Soc. St. Phase II	Reading Phase II
Discussion Question & Answer Lecture	Problem Solving Question & Answer Discussion	Read & Recite Question & Answer Audio-Visual	Read & Recite Discussion	Read & Recite
General Comments				
O.K. to good	O.K. to good	O.K.	Poor	Good

TABLE III

CATHY

Test Name	Date	SS	%ile	Norms
Otis QS Beta	9/67	105 IQ	66 %ile	BEG
Lorge Thorndike	1961	115		
Lorge Thorndike	1963	118		
Lorge Thorndike	1966	91		
Met	12/67			
V			60 %ile	
R			18 %ile	
Sp			43 %ile	
Lang			22 %ile	
L Sk			38 %ile	
Comp			9 %ile	
Prob			8 %ile	
SS			15 %ile	
SS Sk			35 %ile	
Sci			39 %ile	
Iowa Basic	10/64	CA		
V		4.2		
R		3.1		
Lang		4.1		
Wk Study		3.2		
Arith		3.9		
Comp		3.7		

Class of 1973, Phase II LARRY
7th year

Larry is a very restless twelve-year-old who is untidy in dress and grooming. He has to find something to play with while he is talking. Often he would not listen to or would provide an irrelevant answer for a question. He has sandy blond hair and is rather heavy at 140 pounds for his five feet four inches.

Except for phase I reading, all of Larry's subjects are phase II. He takes English, math, social studies and science. His average grade is about B- and he receives 2's in both conduct and effort intermittently. See Table I.

Larry's father is a professor at the university. His mother, who is now divorced from his father, is also a teacher. Both parents graduated from college and his father studied beyond. Larry lives with his father while his younger brother lives with his mother. The family is in the second socio-economic category.

Larry's attitude toward school seems positive. Specifically he feels that the phased program "is good because the slower students don't have to work as hard to keep up with the smarter ones." He would like to change just one thing in school; he would play baseball and softball in gym to the exclusion of other sports.

He seems to have no problems with either the teachers or the counselors. Toward his father, his attitude is one of admiration. "I want

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to be a tanker in the Army like my father was." Nothing was said about his brother or mother.

Finally, Larry seems to feel confident of himself. "I believe I'll be able to go to college later on," seems to indicate that he thinks he will be qualified to attend college.

Next year Larry has signed up for six subjects. He will down-phase in English and social studies, up-phase in science and reading, take math at the same level and add Spanish to his curriculum.

After high school Larry plans to go on to college and then become a "cop" or "maybe an FBI agent, because they get to travel around a lot and help more people than a regular cop." "I also want to become a tanker like my father was." Larry says that although his father is a great influence, he alone is responsible for his plans.

Larry's standardized test scores are below average for his age and year. His IQ score for the Lorge Thorndike was 73 for the verbal and 102 for the non-verbal. On the Metropolitan Achievement Tests he scored below the 50th percentile, national norms, all tests. Unless Larry does much better in the future, his plans of college seem unrealistic. See Table III.

Larry's past grades are about average. In the sixth year he earned an A in art, B's in language (oral), science, social studies, music and gym, C's in spelling (formal and applied) and French, and D's in reading, language (written) and math.

Larry's favorite subject is math "because it's fun to draw circles and graphs." His least liked subject is English "because it's boring to read some of those stories."

There has been one significant grade change. For the first term Larry earned a D in math with a 1 in conduct and a 2 in effort. For the second term, he raised this grade to a B with a 2 in conduct and a 1 in effort. According to Larry, "I just worked harder at it."

Larry conducts independent study in science and math. In science he spends an average of half an hour a day studying about trees and mammals, and does experiments with chemicals. His difficulties come in identifying the various species of animals and plants. This study was initiated by the teacher and so far Larry has received an F for his work. Larry said that the grade he receives for the study is about one-quarter of the total grade.

His independent study in math averages about two hours a week. Specifically Larry studies "circles, decimals, fractions and whole numbers." Like his science work, Larry finds it valuable but unlike science Larry initiated the study. The teacher encourages him to complete the project. He has received a B for the work already done and he believes that this grade is about one-quarter of the term grade.

Larry commented in detail about his homework. The math homework "is good because it gives us something to do at home which I like--drawing circles." "The homework in science is fun, too, because we go outside to do it, studying trees and flowers." In reading he said that it's good "because most of the assignments we read are interesting, then we write reports about what we read." He also enjoys studying maps for his social studies homework. The homework in reading and social studies is not graded but in math and science he receives a C most often.

Larry take part in no school organizations. He is a member of the Boys' Club and the Boy Scouts, both of which he attends regularly. He is an officer in the Boy Scouts. In his spare time, Larry plays baseball, softball, and football and swims during the summer months. The Reader's Digest and comic books are his favorite reading, and he watches television. Occasionally Larry lifts weights.

Larry has two friends in the second socio-economic level, two in the third and one in the fifth. One friend is in the first phase, two are in the second and two are in the third.

Larry received no warning cards this year but he had minor disciplinary trouble. During the first term he swore at the teacher and received a verbal reprimand. He did not think the administration action was fair and his father knew nothing about it. The second infraction was fighting at the end of the first term. Again he received a "talking to" but this time he thought the action fair although he did not tell his father. He received detention for chewing gum and although he again felt the action fair, he did not tell his father. These infractions and the resulting administrative action seem to have had no effect on Larry's performance and his feelings toward school.

Teacher comments cover a wide range of opinion: "Larry is very artistic and he did a fine job;" "has no good power of concentration;" "Larry accepts criticism well and is anxious to do well despite difficulties;" "Larry needs to overcome his 'I can't possibly do it' attitude--he could do much more if he gave himself half a chance."

Larry seems to take advantage of the benefits of phasing. He realizes that he has some difficulties and he tries harder where need be. He is engaged in independent study and finds it valuable. He makes a good effort to learn on his own. These are results which the phasing program seeks.

LARRY

TABLE I

Term	Course: English II			Math II			Reading I			Soc. St. II			Science II		
	*G	C	E												
1st	B	1	1	D	1	2	B	1	2	B	1	2	C	1	2
2nd	C	2	2	B	2	1	B	2	1	B	1	1	B	1	1
3rd	B	1	1	F	2	2	B	2	1	C	1	2	C	1	1
4th															
Final	B			D			B			B			C		

* G: grade
C: conduct
E: effort

TABLE II

Methods of instruction in order of frequency

English ph. II	Math ph. II	Science ph. II	Soc. St. II	Reading phI
Read & Recite Discussion Audio Visual	Problem Solving Read & Recite Lecture	Experience Projects Audio Visual Discussion	Discussion Audio Visual Lecture	Discussion Audio Visual Read & Recite
General Comments				
"It's good. She reads out loud and gives us prizes. We write questions for the class and ask other kids the questions."	"It's good. I like to draw circles and things, which we do a lot."	"It's good. He doesn't instruct the class often. We have to do the work on our own."	"It's good. Like for math. We draw a lot, especially maps."	"It's fair. She doesn't always do what she says she is going to."

TABLE III

LARRY

Test Name	Date	SS	%ile	Norms
Lorge Thorndike	11/1/62	120	not avail.	Nat'l
Lorge Thorndike	1/18/67	U 73 NU102	"	"
Metro. Ach. Word knw.	5/67		1 %ile	"
reading	"		4 %ile	"
spelling	"		3 %ile	"
lang	"		21 %ile	"
lang. st. sk.	"		41 %ile	"
arith comp.	"		30 %ile	"
ss info	"		10 %ile	"
arith prob	"		50 %ile	"
ss skill	"		34 %ile	"
science	"		11 %ile	"
Metro. Ach. Word Knw.	12/67		11 %ile	"
reading	"		5 %ile	"
spelling	"		10 %ile	"
lang	"		2 %ile	"
lang. st. sk.	"		3 %ile	"
arith compl	"		5 %ile	"
arith prob slv.	"		5 %ile	"
soc. st. info.	"		12 %ile	"
soc. st. skill	"		20 %ile	"
science	"		7 %ile	"

Class of 1973, Phase II
7th year

OLIN

It is hard to believe that Olin is a seventh grader. His fidgety nature and the impish gleem in his eye remind one of a healthy third or fourth grade youngster. It is easy to get the impression that Olin is either thinking about some prank in which he has been involved or surely that he is planning a new one. Olin's conduct marks and teachers' comments indicate that such an impression is well founded.

Olin has one phase III course, math. All of his other subjects are at the phase II level: English, French, social studies and science.

Olin entered the Amherst school system in September. His family formerly lived in a small town outside of Amherst where Olin attended grades one through six. Olin lives in a family that is heavily weighted with females. He has two older sisters, three younger sisters and one younger brother. Olin's father is a carpenter. His mother is an inspector at a local business.

Aside from being small for his age (4', 70 lbs.) Olin is in good health. He does not have any physical handicaps but he does regard his size as a handicap in athletic activities.

Olin is somewhat uncomfortable with adults. His interests are still very much those of a young boy. Climbing trees, catching pollywogs, and throwing spitballs when the teacher is not looking are Olin's idea of what makes life worthwhile. Girls are strictly taboo. He feels that he has enough girls to contend with at home and certainly is not interested in the company of any others outside of the family circle.

Olin has no particular plan concerning his courses during the rest of his school years. He seems to be too involved with what is going on today to worry about something that appears so unimportant as a program of studies for the next five years.

Olin enjoys helping his father build houses. He has made friends with an electrician who works with Olin's father. Olin said that he also helps the electrician and thinks that maybe he will be an electrician when he grows up. He figures that electricians make more money than carpenters and feels that money is a pretty important consideration.

Olin was most casual when discussing the prospect of becoming an electrician. He seemed to have the idea that when he was an adult, he would automatically know all he needed to be an electrician. When the interviewer suggested that he might have to go to school or become an apprentice in order to learn the trade, Olin appeared dubious.

It appears that Olin has received little if any planning advice from anyone. His father is probably his chief source of information concerning vocational matters. Olin does not appear to have received any advice from anyone concerning academic matters.

Olin's scores on intelligence tests indicate that he might be successful if he decided to pursue a career that required higher education. However, Olin's school performance and performance on achievement tests indicate that as yet he is not applying himself to school work.

Olin

Olin's marks from grade one through grade six have been inconsistent between subjects and between marking terms. His marks often ranged from A in one subject to F in another. The next marking term might find that the A subject has dropped to a C and that the F is up to a B.

Olin said that English was his favorite subject because he liked the teacher and because the class was easy. He did not have to work very hard in order to get B grades. The subject Olin liked least was social studies. According to Olin the subject was boring, it was too hard and he did not like the teacher. It is interesting to note that Olin received two B's and an A in social studies and that he is up-phasing in this subject next year.

This year Olin's marks have been more stable. Except for math, Olin has earned all B's and two A's during the last marking term. The math grade, his only phase III course, varied from a D to a B and then back to a D. There does not seem to be any ready explanation for Olin's inconsistent performance.

Olin has no idea how or why he is in the phases he is in. He assumes that he is not bright enough to be in the higher phases and he appears to be unaware that he has a choice concerning phase level. His phases for next year were recommended to him by his guidance counselor. He did not question the wisdom of these recommendations.

There are few extracurricular activities in the junior high school. Olin is content to play with his friends after school and on weekends. Olin's best friends are on the same socio-economic and phase level as Olin.

Olin

Olin has not had detention for misbehavior, although he constantly seems to be trying the patience of his teachers. Olin finds it difficult to sit still and to remain quiet. Some of his teachers believe he has a disruptive influence upon their classes. At any rate his behavior has apparently not been irritating enough to warrant detention. Olin has not received any warning cards this year, but he indicated that he probably should have received one in math.

Exasperating, inattentive, immature -- these are the most common opinions about Olin from his teachers.

Olin may be capable of doing the work in phase III or IV classes. By working at a phase II level this year, Olin has met with success and appears to have developed a greater interest in school.

Toward the end of the school year, Olin was less fidgety and more able to carry on a conversation. Olin earned two A's during the last marking term.

He is up-phasing in one course next year. Perhaps with added maturity and encouragement from teachers, Olin will be better able to apply himself to school work. He may, with patience and understanding from others, become a very successful student.

OLIN

TABLE I

Term	Course English Phase II			Soc. St. Phase II			Science Phase II			Math Phase III			French Phase II		
	*G	C	E												
1st	B	1	1	B	1	1	B	1	1	D	1	1	B	3	3
2nd	B	1	2	B	1	1	B	1	1	B	1	2	B	2	2
3rd	B	1	1	A	1	2	A	1	1	D	2	1	B	2	3
4th															
Final	B			B			B			D			B		

* G: grade
C: conduct
E: effort

TABLE II

Methods of instruction in order of frequency

English Phase II	French Phase II	Soc. St. Phase II	Science Phase II	Math Phase III
Read & Recite Question & Answer Spelling & Grammar Drill	Read & Recite Movies Question & Answer	Movies Read & Recite Question & Answer	Experience Projects Lecture Discussion	Problem Solving Question & Answer Research
General Comments				
Some purpose most of the time.	Some purpose most of the time.	Purpose all of the time.	Purpose all of the time.	Some purpose some of the time.

OLIN

TABLE III

Test Name	Date	SS	%ile	Norms
Wisc	4/2/62	120		
Otis		120		
Iowa	1966, 1967		1966 1967	
voc			63 % 62 %	
read			59 60	
spel			11 9	
cop			27 28	
punct			23 19	
usage			67 30	
total lang.			30 18	
maps			55 31	
graphs			86 7	
ref			55 33	

Class of 1973, Phase III TINA
7th year

Tina is a slender girl, approximately sixty inches tall and 90 pounds. She seemed shy, quiet, and did not volunteer information during interviews. She readily and pleasantly responded to questioning, however, and participated as directed.

Tina is in the seventh year of school and has maintained average grades throughout her school history. A review of her record shows subjective evaluations of her teachers describing her as a slow, but very industrious student. She is enrolled in a pre-college course of studies and apparently is succeeding at an average level, with the exception of French in which she earned a grade of D for this year. She is at the phase III level in all her courses except social studies in which she is in phase II.

Tina is the younger of two girls, and there is a gap of fifteen years between her age and her sister's. Her father and mother are both high school graduates. The father is a skilled tradesman and her mother is a housewife. Her older sister, who is married, is a college graduate. Local newspapers are read in the home, along with Reader's Digest and Woman's Day. Her parents never use the library, although Tina claims she uses it frequently. She says her parents are aware of her phase choices and have no significant comments on them.

Tina has no record of other than the usual childhood diseases. Her health is generally good, according to her records and statements.

Tina

The interviewer noted that she was quite thin.

During the first and subsequent interviews, Tina seemed to be timid, hesitating in the delivery of her answers and tending to change them frequently. She gave the impression of trying her responses for reception, and adjusting them if she thought her first response was unacceptable. Under probing to explain this phenomenon, she stated she was not "too sure. I don't always remember at first." Despite her timidity and her constant adjustments of responses, she appeared to be participating willingly.

Tina has no definite plans other than continuing in the pre-college curriculum until she finishes high school. After high school, she says she doesn't know what she would like to do. She said she thought she might go to college like her sister did.

Tina seemed confident of achieving a high school diploma in her chosen curriculum in her present phases. She cited the phase system as a device to help her reach her immediate goals. "I can down phase, if I don't do well."

Tina will probably achieve her plans, as they are now, inasmuch as she scored in the 77th percentile on the Otis QS (Beta), administered in September, 1967. Refer to Table III.

Grades available for Tina were from the fifth year to date. Her fifth year was very successful, including grades equally divided between A's, B's and C's in combination. Grades dropped to predominantly B's in the sixth year, with four C's and one A. During the seventh year, Tina earned C's in mathematics and English, B's in social studies and science, and D in French. See Table I for specific grades.

Tina's favorite subject is social studies. "I think it's interesting." She asserted she liked French least and attributed her dislike partly to the teacher and partly to the subject. Generally her likes and dislikes were rather undefined.

There is a slight decline in Tina's grades over the past three years. Tina could offer no explanation of the grade decline. She hypothesized "Maybe the work's getting harder."

Tina has done some independent study in English, math, science and social studies. She prepared an oral book report for English; she was planning an unspecified report for social studies; she prepared several reports on famous mathematicians for math; and she said that science consisted of mostly independent research in order to complete the workbooks. A follow-up question on independent study indicated she had given up on it during the second term. She gave no reasons although the interviewer suspected that she did her reports early to get them over with. Her reports involved bibliographical research, most of which she got from the public library.

Tina reported no significant homework assignments and only occasional reading assignments. She said she had to prepare science reports as homework and that the reports received letter grades.

Tina

Tina's opinions of teaching methods was divided between "some value most of the time" and "value all of the time." She had specific feelings about the teaching methods she encountered. Specific evaluations may be found in Table II.

A fairly comprehensive test history is available for Tina, including IQ tests, achievement tests, and an Iowa Test of Mental Abilities. Her scores have been consistent over the years. Her grades have shown some minor declines. See Table III for specific information.

Tina chose all phase III's for her current academic year. She chose phase II for math and French for next year and plans to maintain phase III for English, science, and social studies. She said her parents were most influential in her course selection, followed by her counselor and friends.

Factors influencing her were school requirements, general interests and previous marks. Phases were influenced by her counselor, teachers, and parents. Factors involved were general interests, previous marks, and vocational interests. The interviewer feels she requires decision-making support because she was quite firm in making statements concerning factors and people who had influenced her.

Tina was regularly involved in three outside activities, all community organizations: Girls' Club, Girl Scouts and Church Youth Fellowship. She expressed no great enthusiasm for any of the three, only that "they're something to do."

Tina

The five friends she named for the interviewer were all girls and all but one were friends for periods of time in excess of three years. She named only one new friend for this year.

Tina's transcript is void of comments from her teachers other than those of her fifth and sixth grade teachers which say that she is "good worker, industrious" and "slow but tries hard."

Although Tina was friendly, and willing to participate, she did not contribute any more than she was asked to contribute. Interaction was difficult since she seemed to maintain a reserve.

TINA

TABLE I

Term	Course English III			Soc Stud II			Science III			Math III			French III		
*	G	C	E												
1st	C	1	2	B	1	2	B	1	1	C	1	1	D	1	2
2nd	C	1	1	B	1	2	B	1	1	C	1	2	D	1	2
3rd	C	1	1	B	1	2	A	1	1	D	1	1	F	1	3
Final	C			B			A			D			D		

* G: grade
C: conduct
E: effort

TABLE II

Methods of instruction in order of frequency

English III	Soc Stud II	Science III	Math III	French III
discussion question & answer	discussion question & answer audio visual	lecture experience projects audio visual	discussion problem solv question & answer	read & recite question & answer discussion
General Comments				
O.K.	good	O.K.	good	O.K.

TINA

TABLE III

Test Name	Date	SS		%ile		Norms
Lorge Thorndike	1960	CA 6.9 IQ 119				Nat'l
" " ,	1963	CA 8.1 IQ 115				"
" "	1966	CA11.9 IQ 114				"
Otis QS Beta	9/67	CA12.05 IQ		109		
Iowa Basic	10/64			grade equiv		
		V		4.5		
		R		5.1		
		L		4.7		
		W		4.8		
		A		4.5		
		C		4.7		
Metro Achiev Test	5/67, 10/67	grade equiv		percentile		
		May67	Dec 67	May 67	Dec 67	
Verbal		9.7	9.9	81	75	
read		8.7	8.3	74	60	
spel		6.7	6.3	52	28	
lang		6.7	6.8	46	31	
lang skill		10.1	8.6	88	65	
comp.		6.8	6.7	51	30	
prob		6.8	6.4	50	20	
soc stud		5.8	8.1	31	57	
soc stud skill		6.1	5.7	41	25	
science		7.8	7.0	69	39	

Class of 1973, Phase III, IV GLENN
7th year

Glenn impressed the interviewer as being a little boy with considerable unfocused energy. He was, at all interviews, extremely restless, rising from his chair frequently to look out the window; brushing his hands across the surface of the table; twisting and turning in his seat; fidgeting.

Extremely articulate, he tended to speak in part-sentences; dropping a thought in the middle and commencing a new and unrelated one immediately. He was small, about fifty-eight inches tall, and he weighed about 85 pounds. He was difficult to interview because of his impatience, and the interviewer succeeded in directing his responses only by promising and conducting interviews of short duration. In making any response, Glenn first eliminated impossible answers, then improbable ones, and finally settled on one acceptable to him. His elimination processes consisted of what amounted to be verbalized arguments with himself. Although a likeable boy, he was a difficult subject to interview.

Glenn is in the seventh year of school in a pre-college curriculum, which includes English, math, social studies, and science. He has chosen a similar curriculum for next year. His grades vary surprisingly from D's to A's. His phases were III's for English and social studies, IV's for math and science. Perhaps Glenn was best described by his sixth year teacher who wrote "Habits and attitudes vary with the subject and degree of Glenn's interest." His academic behavior appears as erratic as his interaction behavior.

Glenn has a younger brother and a younger sister. His parents are academically oriented: his father holds a Ph. D. and teaches at the University of Massachusetts; his mother is a teacher working on an advanced degree. Glenn remarked that his mother "hardly has time to cook meals." Perhaps significant is the fact that in response to the routine letter to parents of members of the sample, Glenn's mother telephoned the project office to ask why we wanted Glenn in the sample. She stated that she did not think he would help much as he was "a real nut." She did not forbid his participation, however. With reference to his phases and his family's knowledge of them, Glenn said "I told them." His parents consistently agreed with teacher comments that Glenn was "immature." His records indicate some parent interest in his scholastic affairs, although Glenn gives the general impression that they are not too concerned.

Glenn has had the usual childhood diseases and immunizations. His record indicates his parents took him to the Child Guidance Center but there is no record of problems and/or solutions.

As mentioned earlier, Glenn's interview behavior was erratic. This seems to be the case with his school behavior as well, which is borne witness by his varying grades, the previously cited teacher and parent comments, and perhaps by the fact his family thought it important to take him to the Child Guidance Center. Socially, his contacts are limited. His only stated extracurricular activity was Boy Scout membership, and he was able to name only three friends. Glenn seems to be a "loner" in many respects. He does not seem alienated from society and family so much as he seems to have disaffiliated from them, if they do not coincide with his interests.

Glenn could state no vocational goals, not even those of a "hero worship" variety. Nor could he give a clear educational goal. He supposed he would go to college, but he could not indicate any definite plans beyond following a pre-college curriculum in high school. He would appear as yet too immature to make any decisions, however tentative.

Glenn's mental ability and achievement test scores indicate him to be at an intellectual level sufficient for high school and college success. His greatest handicap would appear to be his erratic interests. Grades are available for the years five through seven for Glenn. During his fifth year he received mostly B's, with A in science and D in penmanship. In his sixth year he earned A's and B's with a C in French. In the current year he has earned B's in his four major subjects. Refer to Table III. He received a D in English for the first marking term, and apparently, was sufficiently shocked by this that he decided to apply himself more. He alleged the teacher awarded the D because he had not turned in a report; he was not ready to admit the fairness of the grade, but he stated he has started paying attention to deadlines.

Glenn claims to be working at the Independent Study Center in lieu of taking a course in French. He stated he was working on a design for a chess improvement machine as a project for credit in science. He gave no clear description of what this project involved.

Glenn said he was assigned no homework in English or social studies. In mathematics, he reported textbook reading, study questions, and problems as being assigned; and as being of "value most of the time." For science, he said outside reading and essays were assigned and the homework was "always valuable."

The primary teaching method in all his courses was discussion. He rated all methods of instruction to which he was exposed as "good." He specified that social studies teaching methods were "very definitely good." See Table II for specific ratings.

Glenn has been exposed to Lorge-Thorndike Intelligence Tests in grades one, three and six; to Metropolitan Achievement Tests in years six and seven; and to Iowa Tests of Basic Skills during his fourth year. There exists an apparent disparity between standardized test scores and Glenn's actual performance. His course grades are lower than might be expected on the basis of both types of measurement devices. It may be that Glenn's undeveloped social skills are detrimental to his course achievement. Specific test scores are listed in Table III.

This year's phase placement is equally divided between III's and IV's in English and social studies and math and science, respectively. With reference to this year's phase selections, Glenn indicated that his parents did not react one way or the other to his choice. For next year, he has lowered English to phase II; raised math and social studies to V; maintained IV for science. He credits parents, counselor, and teachers as having influenced his decision. He credits vocational interests, general interests, and school requirements as being influential factors in his choices for next year. It is interesting to note that he implies parental disinterest for this year's choices and yet names them as primary influential person for next year's. He could not explain the indicated change in interest when queried by the interviewer.

He said he spends a great amount of time at the Forbes Library which he labeled "wonderful." He also volunteered that his "special" hobby is inventing, making, and playing games of the table variety. His extracurricular pursuits would appear to be largely intellectual.

Glenn has received no academic warning cards, nor has he been involved in any infractions of discipline, necessitating penalties. He was rather indignant that he received a D in English for the second term, without having had a warning card sent to his parents. He claimed that if one had been sent he would have gotten the report in on time, and thus would not have received the D. Conversations with Glenn's teachers, counselor and administrators reveal they consider him "bright" but a problem because of his restlessness.

It was frequently stated that Glenn had difficulty with handwriting skills. During the current year, the only notation that appears significant is the frequent rating of his effort as being "fair."

It may be estimated that Glenn will benefit from the ungraded programs offered by Amherst High School, because he may vary his phases and his curriculum according to his degree of interest. The interviewer estimates that channeling his abilities and interests in directions of his own choosing, under non-restrictive supervision, may enable Glenn to develop more fully and more successfully than he would be able to do within a traditional school environment. It would seem that maturity would also develop with growth and with added personal responsibility. Please note that Glenn is chronologically one year younger than his classmates; he started school at five; therefore, it seems logical to expect his maturity level to be below that of his classmates. The Amherst system would appear to be the best available educational mode for a youth such as Glenn.

GLENN

TABLE I

Term	Course English Phase III			Soc. St. Phase III			Science Phase IV			Math Phase IV					
	*G	C	E												
1st	B	1	1	A	1	1	B	1	1	B	2	2			
2nd	F	1	3	B	1	1	B	1	2	C	1	2			
3rd	C	1	2	A	1	1	B	1	2	D	2	2			
4th															
Final	C			A			B			C					

* G: grade
C: conduct
E: effort

TABLE II

Methods of instruction in order of frequency

English Phase III	Soc. St. Phase III	Science Phase IV	Math Phase IV	
Discussion Read, Recite Audio-Visual	Discussion Problem Solving Question & Answer	Discussion Audio-Visual Read & Recite	Discussion Lecture Audio-Visual	
General Comments				
Good	Very good	Good	Good	

GLENN

TABLE III

Test Name	Date	SS	%ile	Norms
Lorge Thorndike	1960	117 IQ		Nat'l
Lorge Thorndike	1963	115		
Lorge Thorndike	1966	119		
Otis QS Beta	1967	115		
Iowa Basic	10/64	Gr Equiv		
V		6.7		
R		4.9		
L		5.1		
WS		5.5		
A		5.3		
G		5.5		
Metr Ach Test	12/67	Gr Equiv		
V		11.0	86 %ile	
R		12.2	98 "	
Sp		8.1	56 "	
L		11.2	97 "	
L Sk		12.0	99 "	
Comp		10.8	95 "	
Prob		10.3	88 "	
SS		11.8	95 "	
SS Sk		12.2	95 "	
Sci		12.5	99 "	

Class of 1973, Phase IV CARL
7th year

Carl is bigger than average for a twelve year old: his height is 5'3" and his weight is 130 pounds. He is a very intelligent and articulate lad. He understands and is able to talk about a wide variety of subjects. In conversation, he used words such as "homogeneous" and "select grouping." On the other hand, Carl was not presumptuous about his knowledge. He answered the questions and gave his impressions, but his attitude was not an "I know it all" kind.

Since he is a bright student, Carl has all phase IV subjects. He takes English, math, social studies, French and science. Although the junior high school does not have an honor roll, he would have made it each term this year. First term Carl earned A's in social studies and science, B's in English and French and a C in math. For the second term, he did even better, earning A's in science and English, B's in his remaining subjects. Carl is without a doubt a good student.

Carl's father is deceased. His mother is a librarian. Carl's older brother is a freshman at the high school and his younger brother is in elementary school. The family is listed in the third socio-economic category.

The health record shows that Carl has had no unusual diseases. He is presently in good to excellent physical condition.

In general, Carl has no qualms about expressing his opinions. For example, Carl confronted the vice principal about the reason kids cannot wear long hair in school. According to Carl's theory, he won the argument.

Carl has found teachers who "make me think." "These teachers bring out questions and issues which I haven't thought of."

Carl also demonstrated a positive attitude toward his life in general. "I hang around a lot with my brother, because I admire him." According to Carl, the leader of a band he just joined earns his highest praise. "This band leader is someone I can identify with." He also has a good outlook toward school. He feels that "even if kids didn't have to go to school beyond sixth grade, I would continue in some subjects, because the teachers can bring out questions that we can't think of." It seems that although Carl has a questioning tongue, his attitude is definitely a positive one towards family, friends, school and certain teachers.

Next year Carl will continue with the courses he has now. Math, English, science, social studies and French II will be his major courses and he will be in the same phase as this year.

Carl does plan to go to college, perhaps Amherst College, but he is not sure what he wants to pursue. "I feel I have enough time to decide while I'm in high school." Carl should have no difficulties in being accepted to college and doing well once he is there.

Because Carl is one who thinks and acts on his own, he is also one who sets his own goals and plans. It is true that he goes to his mother and older brother for advice, but in general he decides what courses he will take and what life plans he wants to pursue. He goes to the counseling service for advice "at times" but Carl enjoys seeking out the answers on his own.

Standardized tests bear out the fact that Carl is a very intelligent boy. In the sixth grade -- 1967 -- on the Lorge Thorndike IQ test, he earned a score of 138, which is in the 99th percentile. On the Metropolitan Achievement tests, he scored in the 85th and 90th percentiles overall. This test was also taken last year in the sixth grade. Hence, it is evident that goals of college and higher-phase courses are not unrealistic for Carl.

Carl's regular course grades are as good as his standardized test scores. During elementary school, he did satisfactory-plus work all the time.

English is currently Carl's best-liked subject because he enjoys reading novels and discussing intricacies of theme and plot. Math, on the other hand, gives him the least pleasure because the "teacher is ridiculous." The teacher makes the subject boring.

Carl's opinion of the grading systems in his courses varies a great deal. In English "it is really good; he doesn't give written tests, only thought questions." The social studies system is good because it is fair. The grading system in French is just O.K., "because it is based on tapes which no one understands." Science has a "ridiculously easy" marking system: "the grades are given out too easily, probably because the teacher doesn't read the reports." Finally, the system in math is fair, "because it is cut and dry, very objective."

Carl believes that the homework in social studies, French and science are good "because one needs it in order to keep up." English is also good "because it is left up to the student to do, but not much is given." Finally in math, homework is just "busy work," so it is not valuable.

Carl's friends come from socio-economic classes above or below his own. Three close friends are in the second category, one in the fifth and one in the fourth. This is quite a wide range. The phases of these friends are below his own. Three are in the second phase and two are in the third.

Although he takes part in no formal organizations, Carl has spare time activities which are wide in range; he skis, plays tennis, sails and reads periodicals such as Life, Look, and Post as well as novels. He also spends much time playing in the rock band. One thing that he said he does not do often is watch television.

Carl has received no warning cards but he has been involved in a minor infraction of school rules. He received a verbal reprimand because he willfully missed religious education. Both he and his mother felt the action was fair. There were no effects from this incident on Carl's feeling toward the school nor in his performance there.

Teacher's remarks about Carl were nothing but praise. Typical comments include "Carl is a mature, thoughtful, bright, courteous and cooperative student." "He has good work habits, and he participates in group discussion." "I cannot say enough for his ability and his attitude toward school work." The last comment probably best sums up Carl's impression upon the various teachers. Carl has no difficulty winning the praise and respect of his teachers.

To recapitulate, the ungraded program has allowed Carl the opportunity to work at a level commensurate with his ability and desire. Although not all higher phase courses are challenging for Carl, most do provide him with an opportunity to exercise his talent.

CARL

TABLE I

Term	English Phase IV			Math Phase IV			Soc St Phase IV			Science Phase IV			French Phase IV		
	*G	C	E												
1st	B	1	1	C	1	2	A	1	1	A	1	1	B	1	2
2nd	A	1	1	B	1	1	B	1	1	A	1	1	B	1	2
3rd	A	1	1	F	1	1	A	1	1	A	1	1	C	1	2
4th															
Final	A			C			A			A			B		

* G: grade
C: conduct
E: effort

TABLE II

Methods of instruction in order of frequency

English Phase IV	Math Phase IV	Soc St Phase IV	French Phase IV	Science Phase IV
Discussion Question & Answer Group Research	Problem Solving Read & Write Question & Answer	Discussion Question & Answer Audio Visual	Audio Visual Read & Write Question & Answer	Discussion Experience Projects Problem Solving
		General Comments		
"This is really good; he gives thought questions, we do not just memorize facts."	"This is a cut and dry method. It's fair; but there isn't much thinking on our own."	"This method isn't good. He just talks in the front of the class, and he's a boring speaker."	"It's pretty good, compared to substitute teachers we've had. I like it better now, because we are learning what we're saying not just memorizing."	"It's almost completely independent. We do reports and hand them in."

CARL

TABLE III

Test Name	Date	SS	%ile	Norms
L. T.	3/13/64	134	99%ile	National
Lorge Thorndike	1/18/67	138	99%ile	"
Metr. Ach. Test				
Word	12/67	not avail.	94%ile	"
Read	"	"	90%ile	"
Spelling	"	"	88%ile	"
Language	"	"	81%ile	"
Lang. Skill	"	"	91%ile	"
Composition	"	"	76%ile	"
Problem	"	"	92%ile	"
Soc. Study Skill	"	"	73%ile	"
Science	"	"	71%ile	"

Class of 1973, Phase IV NANCY
7th year

Serious? dignified? reserved? mature? or just shy? Nancy has a quiet manner that seems to defy labeling. She does not appear to be nervous when talking to people, yet there is a self-conscious reserve which is apparent when she talks. Her voice is low, her words carefully chosen, her face noncommital.

Nancy is tall for her age. Her height coupled with her manner in dealing with people might convince one that Nancy is a mature freshman or sophomore in high school instead of a seventh grader.

Nancy is in all phase IV classes. Phase IV is the highest scholastic phase in the junior high school. Her courses include English, French, science, social studies, and math.

She is the youngest of three girls. She has one sister in the eighth grade and one in high school. Her father is a professor at the University, her mother does not work. The family has not been any one place for more than two or three years at a time. Nancy spent most of the first grade in a school in Denmark due to her father's teaching position there. She went to a school in a small mid-western town during the second and third grades. Her family moved to Amherst in the summer between Nancy's third and fourth grades in school. Because her father taught in Germany last year, Nancy spent most of her sixth grade attending school there. Nancy will not be reentering the Amherst school system because her father will be teaching at a college in Indiana.

Nancy, who is five feet four inches tall, 108 pounds, is in good physical condition. Because of traveling in foreign countries she has received more than the normal quota of immunization shots. Since there have been a number of school changes, Nancy's school records are not complete. From health records available, it seems that she has not had any unusual illnesses nor has she suffered from any physical handicaps.

Nancy is a polite, cooperative young lady. She had some difficulty answering the interviewer's questions when a value judgment was called for. Nancy seems to be hesitant to condemn or make any negative statements concerning school, teachers, peers, or family. Nancy likes to think the best of everyone and makes excuses for their faults. When she knew the interviewer better, Nancy revealed a warm and friendly sense of humor.

Nancy plans to take a program of courses geared toward college preparatory work. As some students consider high school a natural progression from elementary school, Nancy considers college a natural progression from high school. Going to college is something Nancy just takes for granted.

When she was asked what she thought she might major in when she went to college, she shrugged her shoulders and said that it was too early to make a decision like that. One might say that Nancy is more than confident that she will go to college. She has not considered the possibility that she might do anything else.

Nancy seems to have been strongly influenced by her parents, who value education greatly. She has not received any formal advice from her guidance counselor. As yet she has not required such advice, for she has not yet been in a position where she has had to make any binding vocational or academic decision.

Nancy's performance on standardized tests indicates that she is above average and that she will probably have little difficulty gaining college admission. Refer to Table III.

Moving from one school to another and attending school where a foreign language is spoken does not appear to have been detrimental to Nancy's achievement. Those marks which are available indicate that she has been performing at a consistently high level. Most of her marks have been A's and B's, C's are rare on her record.

Nancy felt that French was probably the subject she liked best. She said that traveling had given her an interest in foreign languages. She is looking forward to taking German in high school and hopes that she won't forget the German she has already learned.

Nancy was reluctant to name any subject that she did not like. She said that of all her subjects she felt that social studies was a little bit too easy. If she had to name a subject that she liked least it would be this one although she carefully stressed that she liked social studies but just wished that it was not so easy.

Nancy

There have been no significant grade fluctuations on Nancy's report cards. It seems that she has been a consistently conscientious student.

Nancy did one independent research report in English. Her teacher suggested that she do it, because Nancy had finished an assigned project much in advance of the rest of the class and had nothing to do while the rest of the class completed their projects. Nancy's only evaluative comment on this bit of independent study was, "Next time I don't think I'll tell anyone if I finish my work ahead of time." Nancy has not done any other independent study and one might conclude, from her above statement, that she does not intend to.

Nancy feels that the grading system of some teachers is too lenient. She expected lower marks in both French and social studies. Since she had not been giving either subject her top effort, she was surprised at the marks she received.

When the interviewer first discussed phase placement, Nancy did not know what phases she was in and she doubted that her parents knew. It seems that seventh grade students are placed in phases and have little, if any, choice concerning their placement.

Nancy attends her church's social group regularly. She enjoys the friends she has made there, many of whom do not live in Amherst.

Because Nancy has changed schools so often, and attends an out-of-town church, she has few close friends at school. The two close friends she has in school are at the same phase and socio-economic level as Nancy.

Nancy

Nancy has known these two girls since she started the fourth grade in Amherst. Nancy enjoys getting together with her friends and talking. She was reluctant to pinpoint any other activities that particularly interest them when they get together.

Nancy has had no disciplinary problems in school. She finds it hard to imagine herself talking back to a teacher or violating any of the school rules. She has not had any academic problems, except perhaps slight boredom in courses that are not challenging enough for her. However, even when she is not challenged she is conscientious and maintains high marks.

Teachers' comments about Nancy are somewhat contradictory: shy, mature, quiet, self-composed. One opinion all of her teachers share is that Nancy is a bright and successful student.

Nancy seems to be taking school in her stride and getting a great deal out of her varied experiences. She has not been in Amherst long enough to take full advantage of the ungraded system. It appears that Nancy will be successful no matter what the system of education. She certainly has experienced a variety of systems already, and she seems well prepared to handle any future disruption in her education.

NANCY

TABLE I

Term	Course														
	English Phase IV			Soc. St. Phase IV			Science Phase IV			Math Phase IV			French Phase IV		
	*G	C	E												
1st	B	1	1	B	1	1	A	1	1	A	1	1	A	1	1
2nd	A	1	1	B	1	1	A	1	1	A	1	1	A	1	1
3rd	A	1	1	B	1	1	A	1	1	B	1	1	A	1	1
4th															
Final															

* G: grade
C: conduct
E: effort

TABLE II

Methods of instruction in order of frequency

English Phase IV	Soc. St. Phase IV	French Phase IV	Math Phase IV	Science Phase IV
Discussion Reading to self	Lecture	Read & Recite Lecture Question & Answer	Lecture Question & Answer	Discussion Question & Answer Lecture
General Comments				
Some purpose some of the time.	No purpose.	Some purpose some of the time.	No purpose	Purpose all of the time.

NANCY

TABLE III

Test Name	Date	SS	%ile	Norms
Lorge Thorndike	1/18/67	Verb 125 Nonv 103		
Iowa (Grade 4)	1965		Grade Eq	Nat'l
Verbal			7.3	
Read			6.8	
Lang			6.5	
Wast			5.2	
Arith			5.3	
Composite			6.2	
Metr Ach (Grade 6)	6/67		Grade Eq	"
Word know			11.8	
Read			10.8	
Spel			9.8	
Lang			8.7	
Lang SK			11.1	
Arith comp			6.5	
Arith prob			9.3	
Soc St info			9.8	
Soc St sk			10.4	
Science			10.6	

Class of 1972, Phase I, II LAURA
8th year

Laura is a very attractive black girl. She dresses well and is physically more mature than her peers. Her defensive attitude was most apparent as conversations progressed. Provoked by recent incidents involving herself and the principal and vice principal, Laura saw the two as deeply prejudiced toward blacks. Her remark, "They should get them out of this school," typifies her attitude toward certain teachers and students as well.

Laura has three phase I subjects, English, science and math. Social studies and reading are phase II. Her grades have not been very consistent this year. For example, first to second term she went from B to C in English, social studies and reading, from C to A in science and from F to D in math. Laura's conduct and effort fluctuated. Refer to Table I.

Laura's mother has remarried. Her stepfather is a cook and her mother works in a local factory. Both stepfather and mother have graduated from high school. The family is in the third socio-economic category. Laura has five older sisters, two in college and three in high school. She also has a younger brother and sister.

Laura's health is good. She has not had any unusual diseases as a child. She weighs 113 pounds and is five feet three inches tall.

Laura's attitude is negative toward the principal, vice principal and certain teachers because she believes "they are biased against Negroes."

Laura

Although she said she did not enjoy school "all that much" Laura believes that she will continue because "it is the only way to get ahead."

Her attitude towards her family is quite positive. She respects very deeply an older sister and she wants to go to college as this sister is doing. She also has good friends at school.

Next year Laura plans to take English, unified science, algebra IA, French and home economics. English and science will be phase I but algebra will be up phased one level to phase II. After high school Laura said that she would like to go to nursing school or join the Peace Corps. "By being a nurse or in the Peace Corps, I'll be able to help people."

Because Laura was absent during the days when the Otis G S Beta IQ test and the DAT tests were given, the only standardized test scores available are the Lorge-Thorndike and the Iowa tests. The Iowa test results indicate that she was doing 4.5 grade work while in the fifth grade. Refer to Table III. She also scored below average on the Lorge-Thorndike mental ability test.

Laura's sixth year grades were average. Her A's were in art and music while her D's were in language (written), math and social studies. In the seventh grade she was a C student, earning an A in English, a B in science, a C in social studies and D's in reading and general math.

Laura's favorite subject is English because she enjoys discussions of stories and novels. Her least liked subject is math because "the teacher doesn't explain how to do the problems and she takes off our grade if we talk in class."

There was one significant grade change. Laura received a C in science first term and an A second term. She explained, "I just worked a lot harder." The teacher raised the effort grade from two to one.

Laura does independent study for social studies. She believes that "it is quite valuable; I remember a lot about the presidents I've studied." Specifically Laura reads about the various presidents of the United States, then writes reports about each. So far she has earned an A for her work.

Her reactions to the grading systems of the teachers ranged from poor in social studies and math to fair in the other subjects. Social studies is poor because "she doesn't give a fair grade, she bases it on personality." In math, it's poor because "the teacher drops our grade if we talk." "In science we just pass in reports and he adds up all the marks and this is true of our reading teacher."

Laura's statements about the homework in her subjects ranged from purposeful in English to poor in math. She said, "We don't have homework in science, social studies or reading. The English homework is purposeful because we need it in order to pass the tests. The math homework is poor because she doesn't explain it."

Junior high students do not pick their own phase. Laura did, however, change phase this year. She changed from phase II to phase I in English because there was too much work. The decision to change was her teacher's, however. She is happy with the result and she will be taking phase I English next year also.

Laura belongs to no school organizations but she is a member of the Girl Scouts, which she attends occasionally. She told the interviewer she goes with boys occasionally to school dances or to a show. In her spare time, she babysits, watches television, plays with her younger sister and reads about racial problems and Black Power. In the summer she swims a lot.

Laura's friends are listed in the second through sixth socio-economic categories with the average being in the third. Two of her friends are in phase IV and the rest in phases I and II.

Laura received a warning card in math, because she was not accomplishing anything and because she "didn't pay attention," according to her own words. Neither she nor her parents thought the warning was fair. Laura also was sent out of the class because the teacher claimed Laura swore at her. After being sent out of the class, Laura received a verbal reprimand from the principal. Here again neither Laura nor her parents thought the action was fair. This last incident probably increased her dislike for certain teachers and for school in general.

Many teachers agree that Laura needs to improve in effort. One teacher says that "she is courteous and helpful in the classroom but she needs improvement in all areas." Another says that "there is no real effort on her part to do better." On the other hand one teacher feels that "she has good work habits; and she has put more effort into her work lately." It seems then that Laura fluctuates much in her performance.

Laura seems to lack the desire to do well all the time. When she feels like giving her best effort, she can do the work. She mentioned that the phasing program is good "because kids of the same ability are placed together and have a better chance of doing good." The phasing program has improved her outlook toward school to some extent.

LAURA

TABLE I

Term	Course English Phase I			Science Phase I			Soc Studies Phase II			Math Phase I			Reading Phase II		
	*G	C	E												
1st	B	2	1	C	1	2	B	1	1	F	3	3	B	1	1
2nd	C	2	2	A	1	1	C	2	2	D	2	2	C	2	2
3rd	B	2	1	C	2	1	C	2	2	D	2	2	C	2	1
4th															
Final	B			B			C			D			C		

* G: grade
C: conduct
E: effort

TABLE II

Methods of instruction in order of frequency

English Phase I	Science Phase I	Soc. Studies Phase II	Math Phase I	Reading Phase II
Read & Recite Discussion Group Research	Read & Recite Question & Answer Experience Projects	Read & Recite Discussion Lecture	Problem Solving Question & Answer Discussion	Read & Recite Discussion Group Research
General Comments				
"It's good. We discuss things."	"It's poor. He doesn't explain; he just gives an assignment and we're supposed to know how to do it."	"It's poor. We don't do anything; the teacher just gives us maps to draw."	"It's good. She explains the problems."	"Her instruction is fair; because she gives us vocabulary every week, it's boring."

LAURA

TABLE III

Test Name	Date	SS	%ile	Norms
Lorge Thorndike	12/2/65	77	not avail.	Nat'l
Iowa Basic	10/64 grade 5		grade equv.	
vocab			4.2	
composition			4.6	
spelling			4.4	
capitalization			4.3	
punct.			5.0	
lang. usage			4.0	
maps			4.4	
graphs			3.7	
use of mat.			4.0	
arith concepts			5.0	
problems			5.6	
total			4.5	
*				

*note: Laura was absent when both the DAT and Otis Beta tests were given, and no attempt has been made for her to make them up.

Class of 1972, Phase II
8th year

IRA

Ira is a handsome boy, with generally a pleasant smile. He is about sixty-eight inches tall and slender at approximately 140 pounds. At first distrustful of the interviewer, he became more open with ensuing interviews. Ira was at all times a willing participant, but his participation was hindered because of an inability to express his thoughts orally.

Ira has pursued a general curriculum in junior high school with limited success. English, math and science are phase II, history is phase III and he is taking a remedial reading course. A review of his records indicates that Ira entered school with average abilities but has "gone down hill" steadily in achievement. There are indications that his first difficulties were environmentally inspired. He was retained in year three, then maintained minimum achievement. There are hopeful indications of improvement: following a poor first term this year, his grades showed a striking rise to four B's and an A for the second term. Specific grade history will be shown in Table I. In general, Ira's elementary school performance was poor but signs of improvement are apparent in his junior high school performance.

Ira is the tenth born of eleven siblings. From family data elicited from Ira, males in the family are outnumbered and are surpassed in achievement by the females. His father, a high school graduate, is a disabled worker who has been unable to work since Ira entered school.

Ira's mother, also a high school graduate, is employed in a service utility at the University. Two older brothers are trade school dropouts and one is currently in high school. His younger brother is in elementary school. Of six older sisters, four are high school graduates and one attends the University. Of the two remaining sisters, one is an x-ray technician, the other a licensed practical nurse.

Further glimpses of the family are found in the 1962 report of a School Adjustment Counselor who noted "father chronically ill for years." All parent-teacher conference records indicate mother alone attended. Ira would appear to be the oldest, active male in his family as his older brothers are married and have their own families now.

Ira has enjoyed excellent health, having had only the usual childhood diseases. His sixth year teacher had occasion to report that "he is very strong."

Ira was a cheerful and willing participant in the study although seeming to have difficulty in verbalizing. He had a manner of hesitating before giving any response, and then after responding tersely, would seem to struggle to add to his response.

It is a matter of record that Ira has had adjustment problems. The counselor's report, referred to earlier, contained references to Ira's feeling " --very much threatened when he has to compete with others," and "Ira will need a great deal of support and attention." Curiously enough, teacher comments throughout elementary school confine themselves to his academic deficiencies. It may thus be inferred that his behavior was relatively normal. His sixth year teacher, in contrast to the others, apparently encountered some behavior problems, as she writes "behavior remains a problem, for he is very strong, but he has improved."

Ira reported some difficulties with his social studies teacher this year. He up-phased into her phase III level course and was given a D for the term after only three weeks in class. He stated "she's got it in for me." Ira was down phased as a solution to the problem.

Ira disdainfully feels all the other students are "little kids." Ira stated he would "like to be left alone." Discussions with Ira's guidance counselor indicate the school is trying to deal with his behavior, without attempting to isolate or treat the cause.

In response to the interviewer's question "What would you like to do when you finish school?" Ira's thoughtful reply was "Something peaceful." Further questioning could elicit no elaboration of the remark nor any stated educational or vocational goal.

Ira has selected a general course at the second level for next year with cabinet making as a vocational course. He stated the counselor chose the curriculum and he agreed to it whereas the counselor said he "suggested" and Ira concurred.

Ira's counselor has helped with planning advice to the extent he has estimated a vocational education to be Ira's "best bet." Ira attributes planning aid to his counselor, teachers, and a friend, with reference to the ninth year of school only. He stated his phase choices were made by himself.

Ira's counselor has stated that Ira might think of a clerical position in a trade, for example as a "tool crib clerk." He stated he based this decision on the results of the DAT (L) administered in the fall of 1967. Ira scored at the 80th percentile in clerical speed and accuracy. Two other scores at the 50th percentile were in arithmetic reasoning and grammar. All other scores were below the 50th percentile.

Ira has maintained minimal achievement through elementary school. His sixth year teacher wrote "Ira is seriously below grade level in all areas and has, for this reason I guess, given up." Ira has shown an improvement, however, in grades for both seventh and eighth years. Prognosis still remains doubtful, it may be hoped that phasing will enable Ira to experience success and improve further and consistently.

During this first term, Ira did a programmed learning project for math and a report for science as independent work. For disciplinary reasons, he is sent to the library every English period for independent reading and study. Upon completion of a unit, he is tested, and then proceeds to the next unit. He says he likes it this way as it gets him "away from the little kids."

Ira made several statements with reference to homework. Significantly he said of English, "I have to catch up. I study some in spare minutes." The attitude his statements seem to indicate may explain the relatively excellent second term grades. Social studies homework consisted of outside reading, of which Ira said "You need it for class discussion--you need the reading to take part." Of science homework he said "a report topic is up to the student. I don't like that." It would seem he prefers some structure even when the ensuing study is to be independent.

He found science homework of "some value some of the time." He rated English homework as having "value most of the time," social studies and math as "usually valuable." Ira's general reaction to teaching methods was expressed as "good," or "OK." Particular methods and ratings may be found in Table II.

Ira claimed, almost belligerently, that he chose his own phases. He said his parents knew of his placement and felt he should be in a higher phase but acceded to his insistence that he be phase II. It is evident from talks with the counselor that neither he nor any of Ira's teachers dispute his choices.

Ira belongs to no organizations and probing elicited the fact that he "just hangs around with the guys." Although he named five friends, they are all in high school.

Ira's records show no formal instances of disciplinary infractions although misbehavior is implicit in at least two instances. In conversation with Ira he cited his present English teacher as unfair for banishing him from class when he told the class to "shut up." He alleged the "bunch of little kids were talking and horsing around" prior to his outcry. He said he was punished and they were not. His counselor specified one incident this year when a teacher ordered Ira to relinquish a pencil. When he refused to do this, the teacher tried to remove the pencil from his hand but could not as his strength was superior to her's.

In the absence of particulars, it is difficult for the interviewer to assess Ira's behavior. The Amherst school system has not labeled him a "bad boy" or a troublemaker but neither has it labeled him good. The interviewer is left with the general impression that Ira is considered volatile and will, perhaps, not explode if he is left undisturbed.

Ira has a test record of steadily falling behind his grade level each year through the seventh. This, his eighth year has seen a reversal of the downtrend in Ira's achievement which may possibly be credited to the phase situation. Ira is making his own level of performance choices now, and a beginning of improvement, generated by the indicated acceptance of a minimal self responsibility may be in the offing.

Since Ira is only one chronological year behind his grade level it may be hoped that further exposure to ungraded, phased courses may enable him to continue to improve. Counseling would seem to be beneficial in high school.

IRA

TABLE I

Term	Course English Phase II			Math Phase II			Science Phase II			Soc. St. Phase III			Reading (Rem.)		
	*G	C	E												
1st	B			D			C			B			B		
2nd	D			F			D			D			B		
3rd	B			B			B			A			B		
4th															
Final															

* G: grade
C: conduct
E: effort

TABLE II

Methods of instruction in order of frequency

English Phase II	Math Phase II	Science Phase II	Soc. St. Phase III	Reading (Rem.)
Independent study. Reads books in library with test after each chapter	Lecture Question & Answer Audio Visual	Lecture Audio Visual Experience Projects	Discussion Audio Visual Lecture	
General Comments				
Good	Good	Good. "A really good teacher."	Good	Good

IRA

TABLE III

Test Name	Date	SS	%ile	Norms
Lorge Thorndike	1/63	106 IQ		
Lorge Thorndike	12/65	81 IQ		
DAT	1967			
VR		13	30 %ile	
NA		8	5 "	
VR & NA		21	15 "	
AR		29	50 "	
Cl Sp & Acc		43	50 "	
MR		40	40 "	
SR		21	45 "	
SP		52	45 "	
GE		23	60 "	
Iowa Basic	1964			
V			43 %ile	
R			40 "	
Sp			39 "	
Cap			43 "	
Punct			40 "	
Usage			35 "	
Map			56 "	
Graphs			51 "	
Ref			40 "	
Arith Concepts			54 "	
" Problems			43 "	
Total			44 "	

Class of 1972, Phase I, II, III NED
8th year

Ned is a rather sullen young man who feels that adults are imposing upon him by creating rules for him to live by. He gives the impression that he would rather be any place other than school. When talking to Ned one might be impressed with the fact that he seems alert and has facility with words, yet he deeply feels that he is not very bright and that he cannot keep up with other students.

Ned is in the eighth grade. He is taking math at phase I level, English and French at a phase II level and social studies and science at a phase III level.

Ned's father is a professor at the University. His mother, a college graduate, does not work outside the home. Ned has one younger brother and one younger sister. His parents want him to get a good education. He said that they do not push him, but that he can feel that they are disappointed in him.

Ned is rather on the hefty side. He is five feet five inches and weighs 142 pounds. He has no physical handicaps, and aside from the usual childhood diseases he has not suffered from any serious illnesses.

Ned seems to be a defeatist, believing that he will be a failure in any new venture he undertakes. As soon as he encounters difficulty in any project, he is likely to give it up; giving up is easier than facing the prospect of failure. Ned is complex and he not only tends to be somewhat hostile and aggressive, he also feels sorry for himself much of the time.

Ned does not have any particular plans concerning secondary school. He would like to be a successful student; he would like to work at a higher phase level; and also he would like to get school over with as quickly and painlessly as possible.

Ned feels that his parents would like him to go to college but he doubts that he has the ability to attend. Moreover, he is not sure if he would like to attend college.

There seems to be something of a sour grapes attitude working. If Ned feels that he lacks the ability to do something, he develops the attitude that he did not really want to do it anyway.

Ned is phasing up in two courses next year and is taking one course in metal work. He is taking two general courses, one in science, the other in math. His final course is a foreign language. There is no clear cut career direction in the program of studies Ned has outlined for himself.

Ned's confidence in his abilities has increased somewhat throughout the school year. However, he lacks the self-confidence necessary to commit himself to one course of action or specific program of studies.

Ned said that he had received a minimum of advice--that he has been told what courses to take. He feels that he has had little choice in the matter.

Ned seems to carry his defeatist attitude into the test-taking situation. His scores on intelligence tests range from IQ 118 to 90. His scores on achievement and aptitude tests are significantly below the 50th percentile. On the WISC, administered in the third grade, Ned scored 118 on the verbal scale and 86 on the performance scale. The test administrator reported that Ned seemed to just give up after he had experienced failure on some of the performance items. Ned may have the ability to do the work necessary to gain college admission, yet it seems doubtful that his achievement will be sufficiently high, given his present attitude and performance.

Ned has had a history of below average grades. His marks improved somewhat last year when he was working at a phase II level in all of his courses. Because of his improved marks, Ned up phased in two subjects for this year. He was able to maintain high marks in both of these subjects. Ned has had some difficulty with math throughout school. Much to his annoyance, he was in a phase I math class this year. He maintained very acceptable grades, primarily because he wanted to get out of the phase I level.

Ned said that he liked science better than any of his other classes. He thought it was an interesting subject and he enjoyed the opportunity of choosing topics he would have to study. The two A's and one B he received in this phase III course were his highest marks.

Ned had a difficult time deciding between math and French as his least liked class. He finally decided that he disliked French more than math because of the teacher. The grades he received in French--two F's and one D--were his lowest this year. Ned, however, plans to continue with French next year because he dislikes the teacher not the subject.

Ned's marks have been fairly consistent this year. French is the only subject where his marks are significantly lower than last year. Ned feels that there is a possibility of improved marks next year with a different French teacher.

Ned has done some independent study in science, history and English. His work has involved using the materials in the Learning Resource Center. His independent study has not involved work to be passed in for grades. Ned started working in the Learning Resource Center because he found that he got into trouble during study periods when he was not occupied. In the Learning Resource Center he can keep busy with things that interest him: science, history and English are his favorite and most successful subjects.

Except for French, Ned feels that the marks he has received are an accurate assessment of the work that he is doing. He believes that his French teacher is unjustly stringent in her evaluation of his work. Ned feels that he is doing as well in French as other students who are getting better grades.

Ned does the very minimum of what little homework he has. He feels that when he leaves school at the end of the day he should not think about it again until the next day. The type of homework Ned does receive is usually written homework, answering study questions and doing problems. Ned feels that his homework has some value some of the time but he adds that he can usually do just as well in class without doing homework.

In English, history, and science Ned rates the teaching methods used as being purposeful all of the time. In French and math Ned feels that the teaching methods have some purpose most of the time.

Ned feels that he has had little say in the matter of his phase placement. Because he feels that being in phase I math is humiliating, he would have liked to up phase during the year, but he did not think he would be allowed to do so.

Ned said that he had received some encouragement from home to up phase for next year and that his guidance counselor had also encouraged him. He will have two phase II classes, three phase III classes and one phase X class next year. He is pleased about his placement for next year, especially with up phasing in math. He seems unaware that for all practical purposes, phase II is the lower phase in the high school.

Ned is a member of the Boy Scouts. He is active in the Boy's Club and is on the basketball team. He enjoys athletic activity of many kinds, both as a spectator and as a participant. He likes the Boy Scouts because of the opportunities to go camping. Most of his friends are also in the Scouts and they are working at the same or somewhat higher phase level as Ned. Most of them come from families of the same socio-economic level as Ned's family.

Ned

Ned has had detention on several occasions for talking in class. He felt that the detention was at times warranted but on other occasions he was being "picked on." He did not tell his parents about his disciplinary problems, because he thought they would be angry with him. Ned has experienced a number of failures in school. Each failure seems to have added to his defeatists attitude.

Many of Ned's teachers feel that he is defiant, careless, and that he lacks persistence. All seem to agree that he is capable of doing better work than he has done in the past.

Ned's achievement in school and his scores on standardized tests have been inconsistent. In the past he has given up whenever he encountered difficulty. However during the seventh and eighth years, Ned has experienced improved academic success. His attitude toward school is becoming somewhat more positive. Even though he failed French, he is not giving up on it. Although he doubts his own ability he has allowed himself to hope that he can do better, not only in French, but in all of his subjects next year.

The ungraded system is helping Ned to develop self-confidence. He is beginning to enjoy school and is looking forward to next year with hope, rather than with expectation of failure.

TABLE I

NED

Course

Term	English II			Hist. III			Science III			Gen. Math I			French II		
	*G	C	E												
1st	C	2	3	B	1	1	A	1	1	B	1	1	F	3	2
2nd	B	1	2	B	1	1	A	1	1	B	1	1	D	3	3
3rd	B	1	1	B	1	1	B	1	1	C	2	1	F	3	3
4th															
Final															

* G: grade
C: conduct
E: effort

TABLE II

Methods of instruction in order of frequency

English II	Soc. St. III	French II	Math I	Science III
Lecture Discussion Question & Answer	Lecture Question & Answer Read & Recite	Question & Answer Oral Drill	Lecture Question & Answer	Group Research Read & Recite Audio Visual
General Comments				
Purpose all of the time.	Purpose all of the time.	Some purpose most of the time.	Some purpose most of the time.	Purpose all of the time.

TABLE III

NED

Test Name	Date	SS	%ile	Norms
Lorge Thorndike	1961	118		
Lorge Thorndike	1963	90		
WISC	1963	verb 118		
		perf 86		
		full 103		
Lorge Thorndike	1965	95		
Otis	1966	98		
DAT verbal	1967		25 %ile	
num			5 %ile	
V & N			10 %ile	
Abst			35 %ile	
sp rel			30 %ile	
mech			30 %ile	
cler			35 %ile	
spel			50 %ile	
gram			25 %ile	
Iowa	1963 1964		1963 1964	
grades. . .	. . 4 and 5	V	4.5 5.5	
		R	2.5 4.3	
		L	3.1 4.2	
		WK	3.2 3.7	
		A	3.2 4.3	
		C	3.3 4.4	

Class of 1972, Phase II
8th year

MARGO

Dizzy, in a fog, good natured, eager to please, these are probably the first impressions one is likely to form of Margo. She seems to take life as it comes, with no thought about tomorrow. She is unassuming and seems to be unaware of the impression she is making on people.

Margo's answers to questions are brief, not because she is uncooperative, but because she does not realize that more elaboration would be helpful. She is in the eighth grade, taking English, social studies and science at a phase II level and French at a phase III level.

Margo's information about her father is limited. She does not know what kind of work he does nor is she sure what his educational background is. Her guess is that he dropped out of high school. Her mother is a kitchen helper and Margo is sure she graduated from high school. Margo has two older brothers, both of whom graduated from high school. There is a limited amount of reading material at home. When Margo needs a dictionary or encyclopedia she goes to the public library.

Margo is five feet five inches tall and weighs 130 pounds. She had all the usual childhood diseases and the usual immunization shots. She has no physical handicaps. Her health record and her general appearance indicate that she is in good physical condition.

Margo is friendly, cooperative, and eager to please. She is somewhat disorganized, often forgetting books, getting confused about her class schedule, and forgetting homework. She seems to have difficulty planning ahead and seeing the possible consequences of her actions. She is optimistic and trusting, sure that others are looking out for her welfare and that she need not concern herself about the future.

Margo does not plan to continue her education after high school. She does not particularly want to be a secretary, but she can't think of any other occupation that her high school education might prepare her for. Therefore, she plans to take a program of courses that will include a number of business subjects.

Margo is taking a general course of studies next year, including business and home economics. She is not going to take French and has apparently decided to follow a program that is not heavily weighted with academic subjects.

Margo is fairly sure that she will be able to complete the high school curriculum although she is anticipating some difficulty with math. She failed math and is not planning to take any math next year, hoping that she will be able to pick up this requirement later.

Margo said that her parents are not very interested in her school work and that they are content as long as she stays out of trouble. Her guidance counselor has supervised course selection and phase level selection and has been her main source of advice.

Margo's scores on standardized tests have been generally average or below. Her decision not to pursue higher education seems to be a wise one. She scored in the first percentile on the clerical section of the DAT. If this is an accurate indication of Margo's clerical aptitude, she will probably experience a great deal of difficulty with the program of courses she currently intends to pursue. Refer to Table III for test scores.

Margo has had some difficulty throughout school, especially with numerical subject matter. Most of her work has been somewhat below grade level.

Margo likes both history and science; moreover, these are the courses in which Margo received her highest marks this year. History is enjoyable because the teacher tells jokes. She likes science because of the variety and the opportunity to choose the topics she will study.

Margo dislikes math because she feels it is too hard: that the teacher did not explain things very well, even when she went for extra help after school. Margo failed math every term this year.

Margo has done independent research in science. Research reports are required of all students in this course. Although Margo has not initiated any independent study on her own, she has enjoyed the science reports and has received almost all A's on them.

Margo seems to be unaware of the criterion her teachers use for grading. Few of her marks have been what she anticipated. In science, French and social studies she expected lower marks, in math higher ones.

Margo has very little homework--an hour and a half a week. The only two courses where she regularly gets work are math and French and the assignments in these two courses are usually written assignments.

Margo had some difficulty naming specific teaching methods used in her various classes. She was unable to estimate the value of individual methods and rated each class in terms of the amount of knowledge she felt that she had acquired, regardless of the methods of instruction used or the marks she received. It is interesting to note that while Margo received low marks in French she felt she learned a great deal in this class. She claimed she learned little in social studies although her grades here were quite high.

Margo is not particularly concerned with her phase placement. She feels that her guidance counselor and her teachers know what is best for her. She does not question their recommendations. She feels that her parents are not interested in her phase placement and she has not discussed the matter with them. She is satisfied to be in all phase II classes next year.

Margo and her friends enjoy going to the Girls' Club where they participate in activities and social events. Her friends are all working at about the same level as she and they come from families of the same socio-economic level.

Margo has had detention several times this year for talking in class. She said that when something pops into her mind to tell one of her friends she doesn't think--she just talks to her friend. She said that she always gets caught and doesn't think it fair because other students also talk in class yet never get caught.

Margo received warning cards each term in math. She was very surprised the first term because she had no idea she was failing. She does not know what she is going to do about this year's failure in math. She seems to be waiting for someone to tell her when and how to make up the course.

Teachers' comments about Margo include the following: "friendly," "slow to learn," "gets along well with classmates," "inattentive."

Except for her failure in math and low marks in French this year, Margo has done rather well in junior high school. She is pleased with her A's and B's, an indication that she is more concerned with high marks than high phase levels.

Margo will be in all phase II classes next year. Technically this is the same level she has been working at this year. However, because there are few subjects at a phase I level in the high school, phase II is the lowest phase. Margo is therefore down-phasing next year and can probably expect to get the A's and B's she likes to see on her report card.

MARGO

TABLE I

Term	Course English II			History II			Science II			Math II			French III		
*	G	C	E												
1st	C	2	2	A	1	1	B	1	1	F	3	1	D	2	1
2nd	B	1	2	B	1	1	A	1	1	F	3	1	D	2	1
3rd	B	1	2	A	1	1	A	1	1	F	3	1	C	2	1
4th															
Final	B			A			A			F			C		

* G: grade
C: conduct
E: effort

TABLE II

Methods of instruction in order of frequency

English Phase II	Soc. Studies Phase II	Math Phase II	Science Phase II	French Phase III
read & recite study questions discussion	movies read & recite lecture	lecture	individual reports experience projects lecture	question & answer read & recite translation
		General Comments		
some purpose most of the time	some purpose most of the time (the movies do not seem to pertain to the subject, would like to have fewer movies, about three times a week now, once a week would be enough).	some purpose some of the time	purpose all of the time	purpose all of the time

Class of 1972, Phases II & III RALPH
8th year

Ralph is shy and a bit awkward. His voice varies from a high tenor to a low baritone, changes which appear to cause him no end of embarrassment. Because his trunk has not yet caught up with the growth of his long arms and large hands, he never seems to know what to do with his extremities. Yet he is eager to please, and once he feels comfortable, he is quite friendly and open.

Ralph is in his eighth year. His courses this year include three phase II subjects: science, math and French; and two phase III subjects: English and history.

Ralph's father is a janitor, whom Ralph supposes has graduated from high school. His mother is an aide at an infirmary. Ralph said that she had definitely graduated from high school and he thought she also had attended nursing school. Ralph has an older brother who graduated from high school and is now in the service. He also has a younger brother.

Ralph has been growing rapidly this year. His height at the end of the year was about 5'6" and his weight about 110 lbs. He appears to be in good physical health. There are no indications on his health record of any problems.

Ralph is a quiet boy who seems to be very self conscious. He is conscientious about his school work, and takes the business of being a student seriously. Ralph is eager to please his teachers and thrives on the encouragement he receives from them. He seems to have a number of close friends.

Ralph plans to take a program of studies in high school that will lead toward college admission. These courses will include social studies, natural and physical sciences, math and at least one foreign language.

He really has no idea what he will do after high school; he says it is too soon to decide. A decision about his future will depend on what high school courses he likes and does well in.

Ralph is rather unsure of himself and does not know whether he has the ability to do the level of academic work required of him in order to gain college admission. He does, however, intend to try until he either proves himself capable or discovers his own inadequacy.

Although his scores on intelligence tests, aptitude tests and achievement tests are not outstanding, they seem to be somewhat above average. It appears that Ralph will have to work harder than some, but this interviewer feels he is capable of attaining a level of achievement which will enable him to attend college.

Ralph's marks throughout elementary school indicate that he was an average student. His work was generally considered satisfactory.

When asked which subject he liked best, Ralph expressed immediate enthusiasm for his science class. He said that he liked the subject matter and enjoyed the opportunity of choosing new subject matter every four weeks. He felt that because there was a choice, he could study the things he thought were interesting. Science was Ralph's only straight A course this year. He noted that he always does better in subjects in which he is interested.

Ralph hesitated over the choice of his least liked subject. He said that he really liked them all about the same. He did mention that French was sometimes boring because there was a lot of memorizing to do. He also said that he did not very much like having to speak in French.

There has been a slight but consistent improvement in Ralph's grades from last year to this year. There were no significant fluctuations in his grades during this year.

Ralph has done some independent study using the tools available in the Learning Resource Center. He said that he enjoys working in the center and often goes there when he has free time. The subject areas Ralph concentrated on were science and English. Ralph felt that his teachers had been helpful in getting him started in independent work.

Ralph said that he was surprised at how leniently some of his teachers grade. He felt that, especially in English, he did not deserve the grades he received on his report card because he had not been working hard but did very well.

Ralph felt that his homework was of some value, some of the time. He did not have much homework this year and what he did have occupied little time. Although Ralph said that doing the homework did not seem to make any difference in grades, he indicated that studying for tests was important.

Ralph

Ralph felt that the teaching methods used in social studies, math, and science were purposeful all of the time. In all three classes lecture is one of the common teaching methods. Reading aloud is used as one of the common teaching methods in both English and French. Ralph rated the methods used in these two classes as having some purpose most of the time. Perhaps because Ralph is self-conscious about his changing voice, reading or reciting aloud give him a more negative attitude toward these methods.

Ralph felt that he had very little to say in his phase placement. He thought that teachers made recommendations to the guidance counselor and then the counselor acted accordingly.

Although Ralph thought that he could probably do the work in higher phases, he felt that he should wait until his teachers recommended that he up-phase. No such recommendation was made during the year.

In the seventh grade Ralph was in all phase II courses. This year he had two phase III courses and three phase II courses. Next year his subjects will be at a phase III level with the exception of phase II algebra.

Ralph is very active in the Boy Scouts. He enjoys camping and outdoor activities. Last summer he went to Boy Scout Camp for two weeks and is looking forward to going again this year. Ralph has a number of long time friends. He does not switch allegiances quickly. His friends are at approximately the same phase level as he. Ralph's closest friends are from families of higher socio-economic status than his own family although some of his friends are at the same level.

Ralph

Ralph has not had any recorded disciplinary problems, although he admitted that he often makes the French teacher angry. Being self-conscious in this class, Ralph has a tendency to act out. However, his misbehavior has evoked only verbal reprimands.

Most of his teachers seem to agree that Ralph is conscientious, co-operative, careful, quiet and shy. One teacher, however, thought that Ralph was careless, another that he was somewhat unruly.

The fact that Ralph has done some independent work this year, wants to up phase, has maintained good grades and perhaps even the fact that he has dared to act out in one class, indicates that he is beginning to develop some self confidence in his abilities.

He has not been pushed to work up to the relative performance he has shown on standardized tests but he has been allowed to work at a comfortable pace. He is pleased with his achievement this year and has developed the motivation to try harder next year.

It appears that the ungraded system is helping Ralph through an awkward period, when being self conscious makes achievement difficult and failure devastating. Ralph has experienced success and is looking forward to his next year in school.

RALPH

TABLE I

Term	Course														
	English III			History III			Science II			Math II			French II		
	*G	C	E												
1st	B	1	1	A	1	1	A	1	1	B	1	1	A	2	2
2nd	A	1	1	B	2	1	A	1	1	B	1	1	B	1	2
3rd	A	1	1	B	2	1	A	1	1	A	1	1	B	2	2
4th	A	1	1	B	2	1	A	1	1	A	1	1	B	2	2
Final	A			B			A			B			B		

* G: grade
C: conduct
E: effort

TABLE II

Methods of instruction in order of frequency

English III	Soc. Stud. III	French II	Math II	Science II
Copying notes from blackboard.	Lecture	Read & Recite	Problem Solving	Indv. Research
Reading aloud	Problem Solving	Question & Answer	Lecture	Question & Answer
Discussion	Question & Answer	Audio Visual		Lecture
		General Comments		
Some purpose most of the time. (Copying notes is boring but it makes things stick in your mind.)	Purpose all of the time.	Some purpose most of the time.	Purpose all of the time.	Purpose all of the time.

TABLE III

RALPH

Test Name	Date	SS	%ile	Norms
Otis Beta	1966	115		
Lorge Thorndike	1965	110		
Lorge Thorndike	1963	123		
DAT verbal	1967		70 %ile	
num			60 %ile	
V & N			65 %ile	
Abst Reas			85 %ile	
Cl			55 %ile	
mech			85 %ile	
sp rel			95 %ile	
spel			60 %ile	
gram			65 %ile	
Iowa grades 4 and 5	1963, 1964		grade equiv.	
			1963 1964	
voc			4.7 6.0	
comp			4.9 6.0	
spel			5.1 7.3	
cap			5.1 6.4	
punc			4.4 5.4	
usage			4.8 6.2	

Class of 1972, Phase III BETH
8th year

Beth was friendly but wary at first; however, following an explanation of the evaluation program and the first several questions, she participated willingly. Under probing, she explained that her desire to finish interviews quickly was due to the fact that she hated to miss class. Beth was serious, and seemed to think out her responses before giving them.

Beth completes her eighth year of school in June. She seems eager to arrive in high school and stated that she looks forward to it. Pressed for a reason, she said, "Oh, I don't know; it just seems more grown up." This year her curriculum includes English, history, math, science, and French at the phase III level. She has generally maintained B grades, showing improvement over the first term, which included two C's. She is planning a pre-college high school curriculum, and her currently stated vocational goal is to become a medical doctor. Questioning revealed she could not give a complete account of what training for such a career would require.

Beth's is an educationally oriented family environment. Her father is "sort of between a professor and a dean" at the University of Massachusetts. Of her mother, primarily a housewife, Beth said "she's earning a Ph. D. now." She has an older sister in Amherst High School and a younger brother in elementary school.

Beth

Beth has no record of unusual illnesses. She appears very healthy -- a sturdy 90 pounds, 60 inches tall.

Beth was generally quiet, polite, and moderately reserved during interviews. She responded to questioning in a friendly way, and tended to give direct answers with limited elaboration. She appeared to be a happy and an integrated young person without seeming to be a girl who would "stand out" in a group.

Her choice of courses tends to demonstrate adherence to pursuit of her initial goals for high school. Beth appears confident that she will be able to maintain a pre-college curriculum at her chosen phase level and her performance tends to justify her assurance.

Beth acknowledged parent, counselor and peer influence in course selection for next year, as well as in phase selections. She denied aid in her vocational choice, saying, "It's just an idea I have."

Only the DAT administered in the autumn of 1967 is listed in Beth's standardized test records. Performance on standardized tests is variable and may lead one to pursue other factors in predicting her college success. Specific results may be found in Table III.

Overall, Beth has performed at a B level in those years for which records are available. Marks are reported for her fourth, sixth, seventh and eighth years, and may be found in Table I. She would seem to be an average student. A fifth year teacher cited her as a "serious student." A sixth year teacher said of her "Conscientious, tries hard."

Beth

Beth stated she liked science best because she wanted to be a doctor and science "helps me get background." She liked social studies least "because of the teacher -- she snaps your head off for no reason. She doesn't realize -- she eats us alive --" Beth, fairly enough, calls the teacher "always interesting." She earned B's in the course.

There is no pattern of fluctuation in Beth's grades. They cluster at a B level with occasional C's and A's.

Beth was conducting independent study only for science in which she was preparing a broad-scope report on insects. It was to be quite general and based largely on bibliographical research. Beth deprecated the effort involved and said it did not constitute a major project.

All of Beth's teachers require textbook reading for homework; math also requires problem solving. For English, social studies, and science she reported outside reading. All her courses involve occasional study questions. English, French and social studies homework is graded; math and science homework is only checked off. She finds math homework "always valuable"; English, French and social studies have "some value most of the time"; and science homework, involving mostly reading as "not applicable." She is not sure of the weight of homework grades in total grades. She thinks homework necessary as "it helps you in class."

Beth rates all teaching methods to which she is exposed as "good," except social studies which she rates "poor." This is the class she liked least. See Table II for precise ratings.

Beth

Beth is a phase III student by her choice. She said "phase III is the one I work best in. I was II in French last year -- I upped to III this year." Her parents are aware of her choice but she alleges they did not influence her seriously.

Beth limits her outside activity to regular attendance in a church youth group. She stated she spends much of her spare time reading and hasn't time for other activities.

Her fourth year teacher called Beth a "happy girl who will come along in studies." Similar remarks by fifth and sixth year teachers were cited earlier.

Beth appears to be an average student, making reasonable use of her abilities. She is not outstanding but seems to be steady. It would seem the school system has served her well thus far.

BETH

TABLE I

Term	Course														
	English III			Soc. St. III			Math III			Science III			French III		
	*G	C	E												
1st	B			B			C			A			A		
2nd	B			B			C			A			A		
3rd	B	2	1	B	1	1	C	1	1	A	1	1	B	1	1
4th															
Final	B			B			C			A			B		

* G: grade
C: conduct
E: effort

TABLE II

Methods of instruction in order of frequency

Math	English	French	Science	Soc. Stud.
Problem Solving	Discussion	Discussion	Lecture	Lecture
Discussion		Question & Answer	Experience Project	Audio Visual
Audio Visual				Question & Answer
General Comments				
very good	good	o. k.	good	poor

BETH

TABLE III

Test Name	Date	SS	%ile	Norms
DAT	1967			Nat'l
verbal		22	65 %ile	
num		13	25 %ile	
VR & NA		35	50 %ile	
AR		37	80 %ile	
Cl sp & acc		37	30 %ile	
MR		47	95 %ile	
SR		24	65 %ile	
Sp		60	45 %ile	
GR		34	80 %ile	

Class of 1972, Phase IV BART
8th year

Bart is a small, thin fourteen-year-old who is pleasant to talk with and seems to possess confidence in himself. Bart is well dressed and groomed. His cooperation was above average. He was not afraid to answer the questions nor was he shy in elaborating upon his views.

Most of Bart's subjects are phase IV. In fact, French is the only phase III course of his subjects, which include English, math, U.S. History, and science. The only 2 Bart received was in effort for the second term of French. Refer to Table I.

Bart's father is a professor at the university and his mother is a housewife. Both parents have graduated from college and his father has earned a Ph. D. Bart has an older brother who attends Amherst Regional High School and two younger sisters. The family is not native to Amherst and in fact, will be moving to the west coast shortly since Bart's father has a new teaching position. The family is in the second socio-economic category.

Bart is in good physical health and had no unusual diseases as a child. His weight of 100 pounds and height of 60 inches show him to be a little below average in stature for his age group.

Bart has a very healthy attitude towards school. He believes that the phasing program is good "because kids who learn at the same speed are put together, and this lets us all have a chance of doing better." He enjoys "learning" especially about history.

This healthy attitude is present toward his family as well as school. He told the interviewer that "the family often watches the CBS news together after dinner and discusses it." Bart also plays badminton and basketball with his older brother. Bart's attitude carries over to himself. He believes that he is capable of doing well in school and that after high school he will be able to go to college. He seems to have few conflicts at home, in school or with friends.

Although the family is moving, Bart signed up for courses next year. His selections included U.S. History, English, French, biology and Algebra I. The only change in phase from this year is U.S. History which will be lower.

After high school Bart wants to go to college where a possible major might be history. He added however, "I'm still really not sure what I would do with it (history)." Bart should have no difficulty in carrying out his stated plans. He seems to have the confidence and the ability to succeed.

Bart mentioned that "I discuss what I'll be doing after high school with my parents sometimes, but not with the teachers or the counselors." He added that "once in a while my friends and I discuss what we'll be doing later on, too."

Bart's standardized test scores are well above average. On both the Lorge Thorndike and Otis Beta IQ tests he scored in the 99th percentile by national standards or norms. On the Differential Aptitude test he scored in the 90th percentile or higher on four of the nine tests and there was only one score lower than the 75th percentile -- 45 percentile on Numerical Ability. Refer to Table III.

In the sixth and seventh grades Bart did B+ work. For the sixth grade he earned A's in all subjects except reading, math, French, music and physical education in which he earned B's. In the seventh grade, he earned an A in social studies, B's in English, science, math and French. It should be noted that last year he had two phase III subjects and the rest phase IV but this year Bart has had only one phase III subject.

Bart's favorite subject is U.S. History, because as he says, "I like to study about war, especially World War I and I am also very interested in military history." Math is Bart's least liked subject "because we just discuss problems, which is boring after awhile."

Bart believes that all of his teachers grade fairly. His comment concerning homework was that in English, U.S. History, science and math they hardly have any. In French, "it is valuable; one learns most by doing the homework in this subject, without doing it you'd fail."

In junior high, teachers select phases for each student. Bart seems to be in a phase compatible with his test scores and past grades. He is definitely a solid, able student who can and does do the work.

Bart is a member of the Boys Club which he attends occasionally. Bart does not date. In his spare time he reads war stories, especially about World War I and Look and Life magazines. He enjoys watching television. Four out of the five friends Bart mentioned are in a lower socio-economic category than himself. Three of his friends are in his same phases while the other two are in phase III.

Only one teacher had a somewhat remedial comment: "He needs some confidence in himself." All the other teachers said that Bart was neat and conscientious in his work and that he has strong enthusiasm for school.

Bart definitely is one who can benefit from the phasing program. He is a student who will take the responsibility for directing his own program and he will succeed in his plans. Bart will take advantage of the challenge higher phase courses will offer.

TABLE I

Term	English IV			Math IV			U.S. Hist. IV			Science IV			French III		
	*G	C	E												
1st	B	1	1	C	1	1	A	1	1	B	1	1	C	1	1
2nd	B	1	1	C	1	1	B	1	1	A	1	1	D	1	2
3rd	B	1	3	D	1	1	B	1	1	A	1	1	C	2	1
4th															
Final	B			C			B			A			C		

*G: grade
C: conduct
E: effort

TABLE II

Methods of instruction in order of frequency

English ph. IV	Math ph. IV	US Hist. IV	Science IV	French III
Discussion Question & Answer Lecture	Read & Write Prob. Solving Discussion	Read & Write Discussion Audio Visual	Discussion Experience Projects Audio Visual	Read & Write Audio Visual Discussion
General Comments				
"It's good. We discuss the questions she raises about novels."	"It's fair. He does most of the talking and we do discuss the work we did the day before."	"Same as English. It's good. The teacher brings up the questions."	"It's good. He gives us facts, we can ask questions. I like it, because we need time to work on our own, which he gives us in class."	"It's poor. She talks too much, and we must ask any questions which we have about grammar in French."

BART

TABLE III

Test Name	Date	SS	%ile	Norms
Lorge Thorndike	12/2/65	128	99 %ile	Nat'l
Otis QS Beta	9/66	122	97 %ile	"
Iowa Tests of Basic Skills	10/64	Not Available	Grade Equivalent	"
Voc	"		8. 1	
Read Comp	"		8. 8	
Lang	"		8. 8	
Skills	"		7. 1	
Arith	"		7. 1	
Comp	"		7. 9	
DAT	9/66			"
Verbal Reasoning	"	30	85 %ile	
Numerical Ability	"	16	45 %ile	
UR & NA	"	46	75 %ile	
Abstract Reasoning	"	38	85 %ile	
Clerical Sp & Acc	"	50	95 %ile	
Mech Reasoning	"	52	85 %ile	
Space Relations	"	42	90 %ile	
Spelling	"	84	95 %ile	
Grammar	"	35	90 %ile	

Class of 1972, Phase IV
8th year

CINDY

Cindy seemed a little shy, in fact she seemed to blush with each question. Although she took her time answering the questions, Cindy did not provide any extra information. Her words were well chosen. Cindy is a rather large girl for her age and is not too particular about grooming or dress.

Cindy does extremely well in her courses which are all phase IV. She earned an A in science, social studies and English both terms, an A and a B in French and math. (Refer To Table I). Cindy received a 2 (in conduct) in only math first term.

Cindy's father is a technical assistant at the University. Her mother works at one of the dining commons there. Both parents are high school graduates. Cindy has one older brother who attends college. She also has seven older sisters, five of whom are married and college graduates, while the other two are still in college.

Cindy is five feet three inches tall and weighs about 130 pounds. She had no unusual childhood diseases and she is presently in good physical health except for a hearing problem in one ear, which has not caused any difficulties to date.

Cindy has a healthy attitude towards school. She was especially happy with the phasing program, "because it gives the slower kids a better chance." She enjoys her subjects and school provides a good place for meeting her friends.

Cindy has nothing but enthusiastic comments about her parents and the family. "I like having seven sisters and one brother; it's fun to be in a large family; and it was especially fun to take trips together."

Cindy is taking all phase IV subjects again next year. English, unified science, French III, speech and ancient history and algebra are her subjects. This does not include typing and gym so it is obvious that Cindy has a heavy work load to carry.

After high school, Cindy would like to study at the University of Massachusetts. Teaching is a possible goal but she is not sure just now.

Cindy mentioned that neither her teachers, counselors or her parents are responsible for her future plans. She did say "I discuss the University with my two sisters who are there." She further stated that her friends and she discuss the future but only occasionally.

Cindy's standardized test scores are well above average. On the Lorge Thorndike and Otis Beta IQ tests she scored in the 98th percentile according to national norms. For the Metropolitan Achievement Tests in the sixth grade she did above average, scoring in the 90th percentile or better on six out of nine tests. Also for the Differential Aptitude Tests she performed at a high level. The interviewer believes that her plans of going to the University are not unrealistic according to the test scores. She is definitely a very capable student.

In the seventh year she earned A's in science, math and French I, B's in social studies and English. All her subjects were phase IV.

Cindy's favorite subject is science "because we're allowed to work together in independent groups; the teacher gives us a lot of responsibility." Math is her least liked subject "because I don't really enjoy trying to understand and solve problems; it's too hard."

Cindy believes that the grading systems are fair in social studies, math and French "because they're objective." In science she feels that the teacher gives too many good grades. Finally in English, Cindy feels that the teacher grades fairly "but sometimes he does grade on his opinion."

When questioned about homework, Cindy said that they do not have any in science. In math "It's good most of the time and it's explained in class anyway." "French is good; we do a lot of drills and write stories which are helpful in learning the grammar." "The homework in English which isn't that often, is valuable but sometimes we have too many questions about values." Finally her comment about social studies was that "it's OK, because some of the assignments are good."

Cindy belongs to no school organizations nor to any in the community. In her spare time she reads, especially biographies about people like Gene Dickson. She watches television programs such as I Spy and the Dating Game. Cindy took typing last summer; during vacations she also does some bowling. Cindy's friends are also in phase IV.

All teachers comments about Cindy were favorable. "She's a very good student in all areas." "She's extremely conscientious; her written work is neat and in general she has good work habits." Another teacher said "She is an excellent writer." One comment perhaps summarizes Cindy's behavior and attitude "She's eager to learn."

Cindy is above average academically. Her comments that the phasing program is good "because it gives the slower kids a better chance" reveals her liking for the program. Her attitude and desire to learn are what the phasing program is trying to instill in students.

CINDY

TABLE I

Term	Course														
	English Phase IV			French Phase IV			Math Phase IV			Soc. St. Phase IV			Science Phase IV		
	*G	C	E												
1st	A	1	1	B	1	1	A	2	1	A	1	1	A	1	1
2nd	A	1	1	A	1	1	B	1	1	A	1	1	A	1	1
3rd	A	1	1	A	1	1	A	1	1	A	1	1	A	1	1
4th															
Final	A			A			A			A			A		

* G: grade
C: conduct
E: effort

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TABLE II

Methods of instruction in order of frequency

English Phase IV	French Phase IV	Math Phase IV	Soc. St. Phase IV	Science Phase IV
Discussion Group Research Lecture	Read & Write Audio-Visual Question & Answer	Problem Solving Read & Write Question & Answer	Discussion Read & Write Audio-Visual	Experience Projects Lecture Audio-Visual
		General Comments		
"It's good. We write our own plays, and it's very interesting."	"It's fair. We do a lot of drills, which isn't fun."	"It's good. It couldn't be much different for the type of subject."	"It's good. We're kind of rushing now, but before we had good discussions."	"That's good. We're allowed to work together on assignments and projects."

TABLE III

CINDY

Test Name	Date	SS	%ile	Norms
Lorge Thorndike	9/12/65	122	not avail.	Nat'l
Otis QS Beta	9/66	126	98 %ile	"
Metro. Ach. Word K.	9/66	not available	90 %ile	"
Reading	"	"	90 %ile	"
Spelling	"	"	98+%ile	"
Lang. Tot. Parts	"	"	95 %ile	"
Lang. Study Skills	"	"	95 %ile	"
Arith Comp	"	"	90 %ile	"
Arith Prob. Solv. & Concepts	"	"	85 %ile	"
Soc. St. Info	"	"	75 %ile	"
S. S. Study Skills	"	"	70 %ile	"
Science	"	"	65 %ile	"
DAT Verbal R.	9/66	31	85 %ile	"
Num. abil.	"	28	90 %ile	"
UR & NA	"	59	95 %ile	"
Abst. Reas.	"	34	70 %ile	"
Cler. Sp. & Acc	"	49	80 %ile	"
Mech. Reas.	"	36	55 %ile	"
Space Rela.	"	33	85 %ile	"
Spelling	"	95	99 %ile	"
Grammar	"	31	70 %ile	"

Class of 1971, Phase II ILENE
9th year

Ilene's most outstanding characteristic, on first meeting, is her lack of responsiveness. Not only is her face expressionless she also seems to be detached from activity going on about her. Ilene is average height and somewhat underweight. She is pale, and her clothing rather untidy.

Ilene, a freshman, is in phase I English, phase II geography and junior business, phase III science and art. At the end of the second marking period, Ilene dropped geography and added X (non) phase home economics.

Ilene's father is a laborer and her mother is a chamber maid. Ilene did not know how much education either of her parents had had. Ilene has three older brothers, one of whom graduated from high school and three older sisters one of whom graduated from high school and attended business school for a short period of time. Ilene also has one younger brother and one younger sister.

There seems to be very little reading material at home. Ilene did not know where the dictionary was kept and has never used it. The family subscribes to the local weekly newspaper. No daily newspapers are read in the home, nor are there any magazines according to Ilene.

Ilene has been in normal health during most of her school years. She has had few absences because of illness; however, she left the Amherst school system in April for medical reasons. It appeared to be unlikely that she would return.

Ilene seems to be a rather passive person. She expressed few opinions and tended to agree with any ideas suggested to her by the interviewer. She is absent minded, often forgetting to keep appointments and becoming confused about class schedules, sometimes reporting to the wrong class.

Ilene intended to take courses in high school that would prepare her for a clerical position when she finished school. She was not enthusiastic, however, about the prospect of doing clerical work but indicated that she could not think of anything else to do.

Ilene was vague about her sources of planning information and advice. She indicated that her parents did not know very much about her course of study or what phases she was in. Her older sisters were apparently of some help to her. Ilene was not sure of school requirements and did not recall discussing these requirements with her counselor at the junior high school.

Ilene's marks have generally been somewhat below average. Until this year they have been primarily C's and D's. Ilene had difficulty this year with geography and junior business. She was very proud, however, regarding her marks in English and Home Economics.

Ilene did not make the honor roll and said that she did not believe it was really important.

Ilene had difficulty deciding which subject she liked best, primarily because she was not enthusiastic about any of them. She did indicate that

Unified Science was somewhat more interesting than her other courses.

Geography was her unhesitating choice for least liked subject. She said that it was too hard and that the subject was not interesting.

Ilene indicated some confusion over teachers' bases for assigning marks. In science and English her marks were higher than she thought they should be and in geography she expected higher marks. She seemed to have only minimum information on how much tests, homework or classroom performance counted toward marks.

Homework assignment was minimal. Usually she did not have any homework except for junior business. What work she did have was usually either reading the text or working on study questions. Although she did seem to be conscientious about doing her work, she did not seem to think that it was of any great value other than to keep her out of trouble with her teachers.

Ilene had some difficulty distinguishing between her preferences for teachers and preferences for particular teaching methods that teachers used. Ilene said that the methods used in World Geography served no purpose. This is the class that Ilene liked least. It is interesting to note that some of the same methods are used in other classes Ilene liked better. In these classes Ilene said that the teaching methods were of some purpose most of the time.

On the Lorge Thorndike, the Otis, and the Iowa Test of Basic Skills, Ilene tended to score somewhat below average. These scores seem to be in keeping with her school performance.

Ilene

There are only three subtest scores available from the DAT. It is interesting to note that her performance is better than one might expect from consideration of her past test record. There does not seem to be any obvious explanation for this discrepancy. Refer to Table III.

Ilene did not seem to know just exactly how she was placed in the phases she was in. She said that she thought that maybe the teachers and the guidance counselor at the junior high placed the students in phases. Ilene did not remember discussing phase placement with anyone when she was in junior high school.

Ilene indicated that her parents did not object to the phases she was in. She gave the impression that they simply were not interested in her school work or her courses.

Ilene was not involved in any of the school's extracurricular activities nor did she display any interest in becoming involved in such activities. Ilene said that she and her friends "just like to kind of hang around."

Ilene's friends are somewhat older than she. One of her closest friends is a sophomore, another is a junior. Her friends seem to be in higher phases and have slightly higher socio-economic status than she.

Since freshmen who do not maintain a C average must be in assigned study halls during free time, Ilene was a permanent fixture in study hall. Any disciplinary trouble Ilene had stems from having to be in a study hall while her friends were not required to be there. Ilene had two detentions this year, one for leaving a study hall without the teacher's permission and the other one for talking in study hall. She felt that the first detention was fair, but indicated that the second detention was unreasonable.

There are no recent comments on Ilene's records. Teachers in elementary school seemed to be impressed with the fact that Ilene was a very quiet child.

Ilene probably would have benefited from more individual attention than she received. Perhaps because she is quiet and because her test scores and school performance seem to be comparable she was overlooked.

Ilene spent a great deal of time in the art room although she had no explanation of her preference for this area. The interviewer met Ilene in the art room one day and noticed that Ilene was receiving some individual instruction from the teacher. One might conclude that she was receiving some of the attention she needed.

Ilene is now staying with an older sister, in another state. There is no information available on Ilene's present physical condition. The school authorities assume that if she attends school in the fall it will be in the school system where her sister is living.

Ilene

TABLE I

Term	English II			Geography II			Unified Science III			Jr. Bsns. II			Art. I III			also Home Ec X		
	*G	C	E															
1st	B	1	2	F	2	3	C	1	2	F	2	3	C	1	2			
2nd	B	1	1	D-	1	2	C-	2	2	F	1	3	D+	1	2			
3rd	B	2	3	dropped			C	1	2	D	2	3	C	1	2	B	1	1
4th																		
Final																		

* G: grade
C: conduct
E: effort

TABLE II

Methods of instruction in order of frequency

English ph. II	World Geog. II	Unified Science ph. III	Jr. Business ph. II	Art ph. III
Reading & Writing Discussion Question & Answer	Read & Recite Discussion Audio Visual	Lecture Discussion	Experience Projects Problem Solving Question & Answer	Experience Projects Discussion
		General Comments		
"Some purpose most of the time"	"No Purpose"	"Some purpose most of the time."	"Some purpose most of the time."	"Some purpose most of the time."

Ilene

TABLE III

Test Name	Date	SS	%ile	Norms
Lorge Thorndike	10-14-61	89		Nat'l
Lorge Thorndike	10-17-63	verbal 90 non " 91		
Otis Beta	10-20-65	93		
DAT verbal	67		70 %ile	"
mechanical			60 %ile	"
space relations			50 %ile	"
Iowa Tests	11/19/65 (grade 7)		grade equiv	
arithmetic			6.0	"
work study skills			5.7	"
English			6.0	"
vocabulary			5.3	"
reading comp.			5.3	"

Class of 1971, Phase II, III BEN
9th year

Nervous and restless, Ben was anxious to finish with the first meeting. Mention was made of the fact that he doesn't like school very much; he can't seem to get interested in any of his subjects. He agreed with any suggestions or comments the interviewer made to him. In short, Ben was not very articulate.

Ben is a phase III student in biology and French, a phase II student in English and algebra I. He has done poorly in all of his subjects this year: a D for three terms of algebra; F in French for three terms; a D, a C and a D respectively in English; and D, D, C in biology.

Ben's father owns a local restaurant and attended business school for two years after high school. His stepmother works as a secretary at the University, having attended secretarial school after high school. Ben has three older brothers, two of whom are step-brothers. The step-brothers attend college and the third brother is a junior in high school.

Ben wears glasses but that is the only exception to his good health. He weighs 154 pounds and is five feet, eight inches tall.

His attitude toward school is neutral; he does not care if he is in school or working. The comment he made about the phasing program was "It seems OK." This indifferent attitude seems to persist in all of his relationships. He said "I'm not sure what I'm going to do later; I guess if I tried I could go to college." In general, he does not care about school, as he said "I'd rather hang around the Tastee Tower or read auto magazines."

Ben's plans for next year's subjects include unified science, French II, again, English, algebra BI and U.S. History. He will have the same phased subjects except English, in which he will increase to phase III.

After high school, the Navy is a possibility if he has to join the service. The reason for selecting the Navy is that "It beats walking." He also said "I do believe I can get into college if I do better in the coming years." His plans for joining the Navy should present no difficulties but as Ben realistically said, he will not be able to go to college unless his marks improve. Except for occasionally discussing his future plans with his father, Ben apparently talks with no one about after high school goals.

His standardized test scores are average to below average. On the Otis Beta he scored on the 63rd percentile, while for the Gamma he scored only the 31st percentile. For the Differential Aptitude tests his percentile ranged from 20 on the numerical reasoning to a high of 90 on Space Relations. His composite percentile was a 51.

Ben's past grades are similar to his present ones. For example, he earned C's in English, reading and social studies, an A in science and a D in math in the seventh year. In the eighth year, he earned D's in English, U.S. History and general math and a C in science.

Ben has not made the honor roll this year. He does not feel that it is important to be on it. In his words "It doesn't mean that much."

Ben was unable to expound on the meaning of that statement.

Biology is Ben's favorite subject, because "I like to do experiments." On the other hand, math is his worst subject because "it's difficult to understand and it's boring."

Ben's comments about the grading systems used by different teachers were that the systems are difficult. In English "It's sort of hard. We have to be accurate or he takes off." He also feels that the system is difficult in algebra. Ben thinks that biology and French have an "OK" or good evaluation systems.

His opinions about the homework in his courses were about the same as for the grading systems. He thinks that in algebra "It's good because it's easy homework." In French and biology he contends that "we hardly get it." Finally he thinks the English homework is valuable because some discussions get interesting.

Ben says that his parents and friends are most influential outside agents in determining his phase placement. He said "My parents influence me a lot, because I want to go into phases which please them, but they don't tell me which ones to take. Also I take certain phases because my friends are in them." Finally, according to Ben, the counselors and teachers do not influence his decision at all, and in the end the phases he takes are mostly "my own decision."

It would seem that the phases Ben is now taking and will be taking are not appropriate for him except in science. According to his past and present marks, he should drop to lower phases if he wants to succeed in these subjects.

Ben played on the school football team. His only other activity is the Boys' Club which is a community organization. He does not date often but he does "hang around up town with the guys," or he reads auto magazines. He also works part time after school and Saturdays for his father.

Ben has received four warning cards to date. A warning was given in French and math because of poor quiz grades; both he and his parents thought the warning was warranted. A warning card was received in English and biology because he did not make up missed work. Here again both he and his parents believed the notice fair. Ben was suspended three times, once for fooling around in English, a second time for giving the teacher back talk in English and a third time for "throwing things" in study hall. In the first two cases, only Ben's parents thought the action was fair. Ben and his parents agreed that the study hall infraction was dealt with fairly. It may be that the disciplinary incidents only exaggerate Ben's dislike or indifferent attitude toward school.

"Ben is extremely restless in class and is often disruptive," comments one teacher. Another says that "he claims he knows he's wasting his time, but he doesn't make any further comments as to his future, etc." One teacher sums up Ben's personality well by saying "this boy was, in general, diffident and did not seem completely relaxed or at ease at any time, although on social levels, he related well enough." "He possesses many mannerisms, some of them reminiscent of the behavior of a wriggly first grader."

The interviewer believes that the phasing program is helping Ben, in that he has had to take the responsibility of deciding what phases are commensurate with his ability. In other words, because he is forced to choose, he does take the responsibility, but the problem arises in his unrealistic choices. Also he needs some stimulus to encourage him away from his indifferent attitude.

TABLE I

Term	Course														
	English II			Biology III			Algebra II			French III			Auto Mec		
	*G	C	E												
1st	D	2	3	D	3	3	D	2	3	F	1	3			
2nd	C	2	2	D	3	2	D	2	3	F	2	2			
3rd	D	2	3	C	1	2	D	2	3	F	3	3			
4th															
Final	C			D			D			F			C		

* G: grade
C: conduct
E: effort

TABLE II

Methods of instruction in order of frequency

English ph II	Biology ph III	Algebra ph II	French II ph III	
Read & Recite	Experience Projects	Problem Solving	Audio Visual	
Discussion	Audio Visual	Lecture	Read & Recite	
Audio Visual	Lecture	Audio Visual	Question & Answer	
General Comments				
"It's fair. We don't get much done."	"It's good. We do interesting projects and experiments, like dissecting frogs."	"It's good. The teacher gives us a lot of free time."	"It's poor. The teacher repeats over and over, it's worthless."	

TABLE III

BEN

Test Name	Date	SS	%ile	Norms
Otis QS Beta	9/65	104	63 %ile	Nat'l
Otis QS Gamma	9/67	94	31 %ile	"
DAT verbal reasoning	9/66	19	60 %ile	"
num reas	"	11	20 %ile	"
UR & NA	"	30	40 %ile	"
abstract reas	"	30	55 %ile	"
cler sp. & acc	"	30	25 %ile	"
mech reas	"	48	75 %ile	"
space rela	"	40	90 %ile	"
lang. spell	"	47	25 %ile	"
lang. grammar	"	27	60 %ile	"

Class of 1971, Phase III HAL
9th year

Hal was a slightly built ninth year student, 62 inches tall and 99 pounds. He had an owlish look about him because of his eyeglasses. Behind the lenses could be seen wrinkled corners of the eyes, which were external evidence of an almost constant, whimsical smile. He was a pleasant boy, cooperative yet slightly reserved. He participated willingly in the project, but appeared to consider his responses with more care than did most other members of the student sample. Although Hal often forgot an appointment, he did not have to be sought out; he always appeared in a breathless state to apologize for his having "forgotten," or "been unable to get away;" and requested a reappointment.

Hal has apparently done well so far in school. In the absence of grades in his cumulative record folder, teacher comments for years five and six indicate he was doing very well. He moved into the Amherst system from Vermont during his fourth year of school. Above average in mental ability, his school record has been good. This year, however, it has fallen somewhat. He claims an interest in science, and his grades tend to indicate that interest as he maintained B in biology and A in algebra. He also earned a B in French I but earned C's in English and speech. He chose phase three in all his courses, with his counselor's advice and consent, and with his parent's concurrence. The choice would appear to have been accurate.

Hal's father is a foreign born, retired motel operator-manager, about whose education Hal professed no knowledge. His mother, he thought, was a graduate of Columbia University. He could never seem to remember to verify this for the interviewer. He is the younger of two siblings; an older sister is in high school also. The family reads the New York Times and a variety of magazines, the most erudite of which is the Saturday Review.

Hal has encountered the usual childhood diseases and has received the general immunizations available. He wears glasses constantly which correct his vision to 20/20. He is apparently healthy, although slight of build.

When interviews could be arranged, Hal was a willing participant who responded thoughtfully. He could name only boys among his five closest friends. He has known three of his named friends for a number of years, one since last year, and one only for several months. His second closest friend is a resident of Vermont and Hal said he visits him several times yearly.

Hal could offer no definite plans for his educational and vocational future. He is following a pre-college curriculum and guessed "he'd go to college, probably engineering." He said he'd like to be an electronic engineer. Electricity is a hobby, and he plans to take an electricity course next year. He reads Popular Science and Mechanics Illustrated magazines at home. His plans for the future are still general.

Phase planning advice has been limited to his counselors and teachers. He said he merely advised his parents of his course and phase choices, to which they apparently agreed. He said they are interested that he bring home good grades, but don't seem too interested in the long term aspects of his education.

Hal took the Lorge-Thorndike during his sixth year, with an IQ of 126; the Otis QS (Beta) in year seven; and the Otis QS (Gamma) in year nine. He obtained an IQ of 121 in both Otis forms. An eighth year Differential Aptitude Test showed him in the 99th and 95th percentiles for mathematical reasoning and spatial relationships. The same device indicated him to be in the 55th percentile for numerical ability and the 60th percentile for arithmetic reasoning. This year's grades in algebra are straight A, which emphasizes the inconsistent DAT scores. Full scores are reported in Table III. Unfortunately grades for Hal are only available for the current year. His records indicate several instances of teachers commenting that he does good work, and is interested and enthusiastic.

Because of the C's he earned, Hal did not achieve honor roll notice. Please note Table I. The honor roll he said is important, because it indicates your trying to do your best.

Hal's stated course preference is biology. He added he plans to take chemistry and physics also--"Science is my bag." He liked English least as he had to read too many things he was not interested in.

Hal conducted no independent study during the current year. Asked about this, he replied that he just did not have the time. About homework, Hal said "I don't really have any reaction--it's just work." Of English he said "The reading is supposedly of value." He felt there was too much algebra homework and biology reading was "necessary to the class discussions." He rated French and speech homework as having "some value most of the time;" his other course work he rated as having only "some value some of the time." He estimated that most teachers weighed homework grades as 1/3 of term grade.

Hal chose phase III for all of this year's courses and will maintain the phase III level next year. He indicated without much explanation that the phasing idea bored him.

Hal is very much uninvolved outside of school. He said that he joined the Ski Club this year and that is the extent of formal affiliations. Asked what he did with his non-school time, he said he just "hung around." He did mention reading science magazines. He cited work on his electricity hobby but could not be specific.

Teacher comments available are those of his fifth year teacher who said of him "friendly and always cheerful," and "an interested and enthusiastic student." His sixth year teacher said, "Hal is doing good work in all areas." Current teachers, when questioned could give no clear statements about Hal. He seems to cultivate anonymity. The interviewer concurs wholeheartedly with Hal's fifth year teacher. It may fairly be added that Hal was quite articulate and thoughtfully cooperative in the survey.

Hal apparently has the mental ability to complete a pre-college curriculum. It would appear that he has not yet recognized the challenge of the phase program, but the school will perhaps change that attitude.

Hal

The interviewer believes that Hal is currently coasting and is not extending himself to any extent. Granted, his available records are insufficient for any firm prediction, it is thought possible that Hal might just be capable of up-phasing in mathematics and the sciences. His C's in English would appear to reflect disinterest rather than inability to do better. It would seem that he is not utilizing the Amherst system to his best advantage, but is using it to take the path of least resistance.

HAL

TABLE I

Term	Course														
	English III			Speech III			Alg I III			Biol III			French I III		
	*G	C	E												
1st	C			C			A			B			C		
2nd	C			C			A			B			B		
3rd	C						A			B			B		
4th															
Final	C						A			B			C		

* G: grade
C: conduct
E: effort

TABLE II

Methods of instruction in order of frequency

English III	Speech III	Alg I III	Biology III	French I III
Discussion	Lecture	Read & Recite	Discussion	Question & Answer
Lecture	Read & Recite	Lecture	Lecture	Read & Recite
Group research	Question & Answer	Prob. Solv.	Group Research	Audio Visual
General Comments				
O. K.	Good	Good	Good	O. K.

HAL

TABLE III

Test Name	Date	SS	%ile	Norms
Lorge Thorndike	1964	IQ 126		
Otis QS Beta	1965	IQ 121		
Otis QS Gamma	9/1967	IQ 121		
Iowa Basic	1963, 64, 65	grade equiv.	%ile 1965	
		63 64		
V		6.9 8.8	96 %ile	
R		7.3 8.1	85 %ile	
Spell			91 %ile	
Cap			70 %ile	
Punct			76 %ile	
Usage			91 %ile	
L		6.7 6.6	82 %ile	
W 1			101 %ile	
W 2			107 %ile	
W 3			93 %ile	
W		6.7 8.4	100 %ile	
A 1			91 %ile	
A 2			91 %ile	
A		6.2 7.5	91 %ile	
Comp		6.8 7.9	91 %ile	
DAT	1966			
VR		25	75 %ile	
NA		18	55 %ile	
VR & NA		43	70 %ile	
AR		31	60 %ile	
Cl Sp & Acc		31	30 %ile	
MR		63	99 %ile	
SR		46	95 %ile	
Spell		62	70 %ile	
Gram		19	40 %ile	

Class of 1971, Phase III WANDA
9th year

Wanda is well-dressed, neat and good looking. She is somewhat heavy for her heighth, weighing 140 pounds for her five feet two inches height. She carries herself well, however, and one would not guess her weight.

Wanda expressed a mild dislike for high school because she felt that her junior high school teachers were better and because she felt very young and misplaced as a high school freshman. "I think that we should have the ninth grade in the junior high to give the kids more time to develop."

Wanda is a phase III student in English, Latin, U.S. History, art and speech, and phase II in algebra. She maintained a strong B average. She received two 2's for conduct in English and two 2's for effort in art. As shown in Table I, she earned mostly 1's in her other subjects.

Wanda's father, who is a superintendent at a nearby plant, and her mother, who is a housewife, are both high school graduates. Wanda's younger sister is in the seventh year. Her younger brother is retarded and often Wanda helps her mother care for him.

Wanda has been reared and educated in Amherst. Economically and socially the family is listed in the third category. Wanda is in good health. As a child she had no unusual diseases.

As has already been mentioned, Wanda is not very happy in high school. Under probing, she finally decided that her junior high teachers are really not better in any way than her senior high teachers. Although she still objects to U.S. History, "I think that the text we get in history is a waste," Wanda's main reason for unhappiness is that she feels very young. In general, Wanda likes the phasing program "because kids of the same ability can learn at the same speed, no one has to wait for the slower kids."

Wanda is very satisfied with the relationships she has with her friends. "I enjoy taking part in school functions with my friends." "We discuss many things together."

Wanda would not hesitate to go to either her mother or sister if she had a problem. She feels that her family is close. "We go on trips together in the summer and sometimes we discuss problems."

Finally, Wanda seems to have a positive attitude toward herself. She knows what she wants to do in the future and she knows what she is capable of achieving now.

Next year Wanda will take phase III subjects except in advanced speech which will be phase IV. She will also increase her course load to include English, biology, Latin II, geometry, art II, advanced speech and personal typing in addition to physical education.

After high school Wanda plans to go to a floral school in order to become a floral designer. "I enjoy working in my garden very much and after floral school I want to some day open my own shop." Last year, however, Wanda wanted to be a dress designer "but now I realize that I don't have that much talent for it."

Wanda impressed the interviewer with her determination to succeed. "I know that I can become a floral designer. I have a green thumb and just by the fact that I enjoy it so much, I should have no trouble." Her plans of becoming a florist are partly the result of her mother's influence. Wanda took part in a 4-H show in which she entered a garden project with which her mother helped.

Standardized tests show that Wanda is above the national average in ability. Her Otis Beta and Gamma test percentiles were 84 and 63 respectively. She did fairly well in the Differential Aptitude Test (refer to Table III) so she should have no difficulty in entering school to become a florist.

For the last two years, Wanda performed above average: in the seventh year she earned all B's in her phase III English, social studies, science and French courses and a C in a phase II math course. Her eighth year courses followed the same pattern according to phasing but she received an A in science and a C in French for the year.

Wanda has not made the honor roll this year and she doesn't think that it is important to do so. After probing she could not explain why she thought it wasn't important although she admitted that while some of her friends agree with her, some do not.

Algebra is Wanda's favorite subject "because the teacher is excellent and also my friends are in that class." Latin, on the other hand, is her least-liked subject, "because I don't get along with the teacher."

Wanda conducted independent study in both art and English. "I initiated the work in English. I read two novels, which I really enjoyed." She maintained that it took only one week to read these novels, The Incredible Journey and A Girl Named Chris. At the end of the readings, she achieved a B on the test she was given. In art she made a clay donkey, a collage and a copper enameling pin. The work took about two or three hours a week. Again, Wanda initiated the project. "I did it because I wanted to. I make these objects and give them as presents."

Commenting on the grading system, Wanda said English was good but a little harder than the system used by some teachers. The teachers in her Latin and Algebra II classes have good systems because they give the student the benefit of the doubt. In U.S. History she dislikes the system "because he marks on just the final test, the whole grade for the term comes from this grade." "In art, too, it's not good, because he bases a lot of the grade on attitude, which isn't fair."

Wanda stated that there isn't any homework for either art or algebra. She does not enjoy the English reading but in U.S. History "even though I really don't enjoy reading, the booklets we're given are interesting." She believes that the homework for both speech and Latin is needed for the type of material to be learned.

Wanda

Wanda has not changed phases this year. "I talk a lot with my parents about the various subjects and phases, but they don't tell me which to take; I make that decision." She continued, "I don't really talk to anyone else about the subject nor about which phase I will take." Wanda consulted her algebra teacher about phase placement due to her trouble with math.

Wanda takes part in a number of organizations, including the girls' basketball team, the Art Club, the 4-H Club, the Pilgrim Fellowship. In addition she teaches Sunday School. She holds no office in any of these functions, although she attends all but the Art Club regularly.

In her spare time, Wanda watches television, especially Perry Mason. She helps her mother care for her younger brother and spends a good deal of time working in her garden. In the summer she joins her family camping and occasionally she reads.

Wanda's friends include only one from the same socio-economic background as herself. Two are in the second and two in the fourth brackets. She has known all of these friends except one before last year and all are in phase III except one who is in the second phase.

Teacher comments about Wanda are favorable and realistic. "Math is her greatest difficulty but she wants to try the two year algebra program, as she is interested in education beyond high school at this time." Another said, "She does extras as suggested; she has good ideas and is very willing." Finally, a teacher noted that "she is a good conscientious student."

Wanda

These comments seem to fit Wanda and her ability.

Wanda believes that the phasing program is good because "you're in class with kids who think the same. You don"t feel stupid if you say something foolish because there are no intelligent students in the class to make you feel stupid."

This attitude is not one which the phasing program is trying to generate. The program is set up to allow people to learn at their own rate of ability rather than to discourage students from taking higher phases because they feel that the students are too intelligent. Wanda is trying to find her place in the high school: she not only feels young she also feels inferior to higher phased students.

TABLE I

Term	Course																	
	English III			Algebra II			Latin III			U. S. Hist III			Art III			also Speech III		
	*G	C	E															
1st	B	2	1	B	1	1	D	2	1	B	1	1	B	1	2	A	1	1
2nd	C	2	1	B	1	1	C	1	1	B	1	1	C	1	2	A	1	1
3rd	B	1	1	C	1	1	B-	1	1	B	1	1	B	1	1			
4th																		
Final	B			B			B			B			B					

* G: grade
C: conduct
E: effort

TABLE II

Methods of instruction in order of frequency

English ph III	Algebra I phII	Latin ph III	U.S. Hist. III	Art ph. III
Lecture Discussion Group Research	Problem Solving Lecture Discussion	Read & Recite Lecture Discussion	Lecture Discussion Audio Visual	Audio Visual Independent Work
General Comments				
"She teaches well compared to the substitute. The regular teacher is much better. She explains pretty well."	"We do all our homework in class. This is a waste of time."	"It's excellent. She explains well; she'll have you come in after school to explain what you don't understand."	"He's O.K. He gets kind of boring sometimes. There's not much class participation."	'He's poor. He seems to favor certain students and he'll pay more attention to his favorite kids."

also Speech ph. 3:
method: group research
comment: She's interesting and instructive. She went over a lot of things with us."

WANDA

TABLE III

Test Name	Date	SS	%ile	Norms
Otis QS Beta	9/65	112	84 %ile	Nat'l
Otis QS Gamma	9/67	104	63 %ile	Nat'l
DAT verbal reasoning	9/66	18	55 %ile	Nat'l
num abil	"	17	45 %ile	Nat'l
UR & NA	"	35	50 %ile	"
abstract reas	"	12	15 %ile	"
cler sp & acc	"	85	99 %ile	"
mech. reas	"	36	55 %ile	"
space rela	"	42	97 %ile	"
lang. spell	"	60	45 %ile	"
lang. grammar	"	23	45 %ile	"
Metr Achievement	5/65		not avail.	"
word knowl	"	53	"	"
reading	"	56	"	"
spelling	"	62	"	"
lang. tot. parts	"	51	"	"
lang. st. skills	"	54	"	"
arith comp	"	60	"	"
arith prob solv	"	52	"	"
soc. st. info	"	58	"	"
s. s. st. skills.	"	58	"	"
science	"	60	"	"

Class of 1971, Phases IV, III OPAL
9th year

Opal seems to be a sincere and conscientious person. She is somewhat emotionally reserved. She ponders questions and appears to carefully choose her words when she responds. Because of the studious and reserved impression she gives on first meeting, it is interesting to note that Opal is quite active in student affairs.

Opal, a freshman, is taking German and French at a phase III level. Her courses in English, history, and algebra are phase IV. Opal also took a half year course in speech at a phase IV level.

Opal and her family suffered a tragedy in 1967 when Opal's mother died unexpectedly. Although she has adjusted to this loss and although the family has a live-in housekeeper, Opal feels that there is more responsibility placed upon her. Opal's father is an electrical engineer. He attended college and did some post graduate work. Opal has two older sisters, one of whom is a junior college student. The other is still in secondary school.

Opal has suffered from some respiratory problems including pneumonia and asthma. Her asthmatic condition seems to be under control and attacks are now mild and infrequent She is also allergic to some vaccines, including smallpox vaccine. Opal has had the usual childhood diseases. She does not have any physical handicap that would prevent her from normal activity.

Opal

Opal's plans for high school are clear cut. She intends to take a program of courses that are college preparatory in nature. She would like to attend college but is not sure what she would like to major in. She said that right now she is interested in foreign languages, but that she is still keeping an open mind.

Opal's program of courses this year included two foreign languages and three other academic courses. Next year her courses will include one foreign language, biology, geometry, comparative politics and economics, and English.

Opal is confident that she is a capable student and that she will be able to get into college. She is not sure whether she will be able to attend one of the colleges she considers best but she is sure that some college will have her.

On intelligence tests, Opal appears to be somewhat above average. Her scores on achievement tests are well above the median. The ability Opal has demonstrated on tests, combined with the achievement she has shown on achievement tests, indicates that Opal is, indeed, a capable student.

Opal has had a history of above average grades. In her phase III and IV classes almost all of Opal's grades have been A's and B's. C's have been rare. In elementary school, Opal's teachers considered her an above average student.

Opal did not make the honor roll this year because she received C's in history every term. She said that with the phasing system the honor roll was not very important. She explained that if she really wanted to be on the honor roll all she had to do was down phase in history; her marks would improve and she would be eligible for the honor roll. Opal was amused at this idea and said that people who get upset about the honor roll are being silly.

Opal gave several reasons for liking German most: a liking for the subject matter, a good teacher, and lots of friends in the class. Opal has not enjoyed her history course this year, however. She said that history has never been her favorite subject, and that this year it is worse because her teacher has unreasonable expectations for performance. Opal said that most of the students in her class feel that their marks do not reflect the effort they are putting into the course.

Opal has not been involved in a great deal of independent study. She did one project this year in her history class. When the class was studying Korea, she wrote to the Korean government for information and based a report for class on this material.

Opal's main reason for not doing more independent study is that she does not have time. Her regular homework and extensive extracurricular activities leave little extra time for independent study.

Opal feels that homework is a valuable learning experience most of the time. She spends about thirty minutes on homework per subject each school night. She feels that she is not prepared to get the most out of her classes if she does not do her homework.

Opal

When the interviewer questioned her about teaching methods, Opal seemed to be reacting to teachers and not to the methods that they used. She rated drill and question and answer as being purposeful all of the time in her German class and only some purpose most of the time in her French class. The teaching method used almost exclusively in her math class was review of the previous night's homework. Opal rated this method as purposeful all of the time. She rated the methods of lecture, discussion and question and answer, used in her English and history classes, as having some purpose most of the time.

Opal said that students coming from the junior high have little say in their phase placement for the ninth grade. She said that teachers and guidance counselors more or less assign phases and tell the students what they are.

Opal wanted to up phase in French but found that her schedule would not permit up phasing this year. She is not taking French next year, but is up phasing in German. Next year she will have all phase IV classes. She said that her selection of phase level for next year was her own decision. She felt that both her father and her guidance counselor agreed with her decision.

Opal is involved in a number of extracurricular activities at school including Pep Club, Ski Club, Campus Patrol, Student Council, Vice President of her class, and Tri-S.

Opal also rides horses for show. Last summer she rode in many horse shows throughout the New England States, New York and Pennsylvania. She is responsible for the care of three Morgan horses at home. She also skis competitively and wishes that she could be on the ski team at school, but only boys are allowed on the team.

Opal has a number of long time friends. Most are working at the same phase level as Opal and come from families of socio-economic status comparable to Opal's family.

Opal is a conscientious student, who is anxious to please her teachers. She has not had any disciplinary problems. When her mother died, Opal had some difficulty keeping up with school work. She found, however, that keeping busy with school work helped keep her mind occupied. She worked harder than before and was able to maintain her usual good grades.

Although she is unassuming, Opal is confident of her intellectual and social abilities. She is a serious, achievement oriented student who likes to see high marks on her report card and works hard to get them. Competition is a challenge, not a threat, to Opal. She seems to go out of her way to get involved in competitive activities, especially social and sports activities.

Because Opal is confident of her ability as a student, she enjoys the ungraded system and the freedom she is now being given to determine the level at which she will work. Opal feels that things will go well in her courses next year. She is looking forward to trying some courses at a five level the following year.

Opal enjoys a spirit of competition in many activities. The phasing system allows her the opportunity to compete successfully with other students: if she finds a course too difficult or too easy, she may adjust to a level of compeition that is more suitable to her needs and abilities.

TABLE I

OPAL

Term	English IV			Speech IV			History IV			Alg. I IV			German III			French III		
	*G	C	E															
1st	B-	1	1				C	1	1	B±	1	1	B-	2	1	B	1	1
2nd	A	1	1				C	1	1	B+	1	1	A-	1	1	B-	1	1
3rd	B+	1	1	A	1	1	C+	1	1	A-	1	1	B+	1	2	B	1	1
4th	A	1	1	B+	1	1	C+	1	1	A+	1	1	A	1	1	A	1	1
Final	A			B			C			A			A			B		

* G: grade
C: conduct
E: effort

TABLE II

Methods of instruction in order of frequency

English IV	History IV	German III	French III	Math IV
Discussion Question & Answer	Discussion Lecture	Drill Question & Answer	Drill Question & Answer Read & Recite	Review of Previous night's homework.
General Comments				
Some purpose most of the time.	Some purpose most of the time.	Purpose all of the time.	Some purpose most of the time.	Purpose all of the time.

OPAL

TABLE III

Test Name	Date	SS	%ile	Norms
Lorge Thorndike	1964	110		
Lorge Thorndike	1965	117		
Otis Beta	1965	118		
Otis Gamma	1967	116		
Iowa spel	1965		83 %ile	
caps			93 %ile	
punc			71 %ile	
usage			88 %ile	
lang			88 %ile	
maps			84 %ile	
graphs			96 %ile	
ref			81 %ile	
WK st			90 %ile	
arith comp			83 %ile	
arith prob			88 %ile	
total arith			87 %ile	
Iowa	1963		V 73 %ile	
			R 70 %ile	
			L 75 %ile	
			W 69 %ile	
			A 73 %ile	
			C 72 %ile	

Class of 1971, Phase IV ADAM
9th year

Adam, born in October 1953, weighs about 115 pounds and is 62 inches tall. At the beginning of the first interview, he firmly volunteered that he preferred to be called by his middle name. Thereafter, Adam merely answered questions with no digression or embellishment. His taciturnity did not appear to be caused by shyness or hostility, although he rarely smiled.

Adam is following a pre-college curriculum. As a freshman he is studying U.S. History, French, geometry, English, and electronics. Geometry is phase V; electronics is unphased; the remaining three courses are phase IV. Adam stated he chose electronics because he is interested in it as a career. He added he first became interested in it last summer. He has been observed frequently in the electronics laboratory. On two occasions, when Adam did not appear for an appointment, the interviewer discovered him there, engrossed in a display of circuits.

Adam is the middle sibling of three. He has two sisters, one two years older and the other three years younger than he. The family moved to Amherst in 1964, when the father entered a doctoral program. Adam was removed from the study after completion of the first semester of school when his family moved to New York after his father received his degree.

Adam

Adam's mother is a high school graduate and functions as a housewife. Adam mentioned that there aren't many neighbors in his home vicinity, particularly at his age level. He added he'd rather live in a more populated neighborhood.

Adam has not suffered any of the usual childhood diseases and his records indicate immunizations against most of them. His school records indicate "excellent" health throughout his school years. He wears glasses that correct his vision to 20/20. He said his doctor told him that he'd outgrow his need for glasses.

Adam avowed an interest in becoming an electronics engineer. He stated he first became interested during the summer of 1967. Probing could elicit no amplification of how he intended to succeed in achieving his goal.

Adam intends to follow a pre-college curriculum in high school, emphasizing methematics, physics and electricity -- or as much of these as is possible. He stated he had no liking for history but guessed he'd "have to put up with it." He also said he doesn't care much for French. He reiterated that he'd take mostly mathematics and science courses, limiting other areas to minimum requirements.

No real note of confidence is apparent in Adam's avowal of career choice. It seemed that he had not thought extensively of how to assure achievement of his life plans.

Adam claimed his ideas were entirely his own, referring to the "science magazines." He concedes "some help" from his counselor in choosing the electronics course. He stated that he had not consulted his parents, but said he had informed them.

Adam's performance in standardized tests placed him in the 82nd percentile locally (Marks Meadow School) on the Otis Quick Scoring (Beta) in January 1965, as shown in Table III. In 1966, he scored in the upper 90th percentile on the Differential Aptitude Test (Form L). In 1967, on the Otis Quick Scoring (Gamma) he placed in the 99th percentile of national norms. In general, Adam's test scores indicate he has ability for realizing a college education.

Adam's available elementary school grades were A's and B's, as were his seventh year grades. There was a considerable drop in his eighth year grades, and he had not improved significantly as of mid-term of his ninth year. These lower grades were accompanied by high standardized test scores. See Table I.

Adam did not achieve honor roll scholarship this year. He stated he sees the honor roll as "no reward because of the phasing."

Adam likes geometry best because he is involved in more or less independent study with four other students. He stated they meet and help one another to learn, and see their teacher only once weekly. At the meetings, the teacher asks if there are any questions. If not, he leaves them for another week. He gives tests approximately every three weeks. Adam said he likes the freedom of the course. He said "there's no written homework and I like math."

Adam

He likes U.S. History least. "I don't like history -- it's too repetitive." Under probing, he revealed this meant he'd had history courses all through school and he was tired of history. Adam earned his only A in geometry and his only D in history.

Adam considered geometry as independent study because of the way the course was conducted, as cited earlier. He stated he was going to write a report for history. However, questioning revealed he had neither started nor chosen a topic, though he affirmed his intention to write an independently researched report.

Adam reported all his teachers gave letter (A-F) grades for homework, tests, and as final grades. He reported objective tests for geometry; a combination of objective and essay tests for English and history; and a combination of objective and oral questions for French tests. He expressed no opinion of the grading system.

"Textbook reading" was cited as the usual homework assignment in all subjects except history, for which he reported "no homework." English homework usually consisted of reading some literary work and then answering questions. French included written exercises. His opinion of homework was "I suppose it's valuable, you have to know the stuff."

Adam found at least some value most of the time in the teaching method he encountered. See Table II for his specific evaluations.

His extracurricular activity was membership in the Audio-Visual Club, in which members learn to operate various audio-visual devices and then function as operators at school assemblies, classes, etc.

Adam named no other organized activities.

Comments in cumulative records are sparse. In November 1964 his sixth grade teacher notes, "Good participation in class discussion." She also writes, "Lack of control may be due to newness." He was relatively new to Marks Meadow School at that time. By April 1965, the same teacher wrote in a parent-teacher conference report, "Very poor work habits -- doesn't mix well. Speaks out constantly during class discussions. Bothers children that sit around him."

Adam's seventh grade teacher wrote "Poor attitude. Capable of doing better." This comment was written in 1966 when he last earned all A's and B's. Since then, no comments are available, but his grades are significantly poorer.

Adam represents a contradiction in that he has consistently obtained high scores in standardized tests whereas his achievement has deteriorated since the eighth grade.

Adam is taciturn, albeit not unfriendly. He was difficult to interview inasmuch as he failed to respond to questioning deemed necessary to elicit sufficient information for a complete study.

ADAM

TABLE I

Course

Term	English IV			U.S.Hist.IV			Geometry V			French IV			Electronics		
	*G	C	E												
1st	B	2	1	D	1	2	B	1	1	B	1	1	B	1	1
2nd	C	2	1	D	1	2	A	1	1	C	1	3	B	1	1
3rd	**														
Final															

* G: grade
C: conduct
E: effort

**transferred after end of first semester.

TABLE II

Methods of instruction in order of frequency

English	U.S. History	Geometry	French	Electronics
Discussion	Lecture	Discussion	Read & Recite	Discussion
Question & Answer	Discussion	Prob. solv.	Audio Visual	Experience Projects
Lecture	Experience Projects	Question & Answer	Problem Solving	Prob. Solv.
		General Comments		
Purpose all of the time.	Some purpose most of the time.	Purpose all of the time.	Some purpose most of the time.	Purpose all of the time.

TABLE III

ADAM

Test Name	Date	SS	%ile	Norms
Otis QS Beta	1/65	123		local
Kuhlman Anderson	1963-64	IQ 126		Nat'l
DAT	9/66			"
verbal		43	99 %ile	
numerical		27	90 %ile	
VR/NA		70	99+%ile	
AR		42	97 %ile	
CS & Acc		61	99 %ile	
MR		56	95 %ile	
SR		55	99 %ile	
Spell		97	99 %ile	
Gram		47	99 %ile	
Otis QS Gamma	9/67	133		
Iowa Basic	9/65			
verbal		109	99 %ile	
read		108	99 %ile	
L 1		114	99 %ile	
L 2		107	97 %ile	
L 3		110	99 %ile	
L 4		109	99 %ile	
L		110	99 %ile	
W 1		78	63 %ile	
W 2		109	99 %ile	
W 3		103	98 %ile	
W		97	95 %ile	
A 1		93	91 %ile	
A 2		96	95 %ile	
A		94	94 %ile	
C		104	99 %ile	

Class of 1971, Phase IV
9th year

SETH

Seth is short and rather round. He carries an oversized brief case that is chock full of books and papers. He has an air of brisk efficiency about him. He answered the interviewer's questions pertaining to the school system thoughtfully, attempting to be as accurate and precise as possible. When engaged in conversation not directly connected with the evaluation study, he was condescendingly tolerant. He gives the impression of being an extremely busy person who does not really like to have his time wasted by small talk.

Seth is a freshman at Amherst Regional High School. His classes in history, biology, Latin, and geometry are at a phase IV level. He is taking English at a phase V level.

Seth's father is a copy editor for a Springfield newspaper. His father attended college for two years and took a number of enrichment courses during his twelve years in the service. Seth's mother, who is the director of a visiting nurses association, is presently working on a master's degree.

Because his father was in the service, Seth and his family have done a great deal of traveling. Seth went to the first grade in England, was in school in Spain during his fourth and fifth grades. His other years in school have been in the Amherst school system. Seth has one younger sister.

Seth is somewhat overweight for his height and age. He is 5'2" and weighs 140 pounds. He does not have an athletic build. His excess weight appears to be like baby fat. Seth has not had a history of severe health problems. Because he has not been in the Amherst school system throughout his school years, his health records are not complete. However, according to current records he is in good physical health.

Seth considers himself to be intellectually superior to his peers. He also feels that he is more mature than most ninth grade students. He does not seem to be a very happy boy; he becomes easily disgruntled if things do not go his way; he has little respect for his peers and hence few friends.

Seth plans to follow a program of courses that will lead to college admission. He plans to maintain his work at a phase IV and V level since he feels that taking academic courses at this level will insure his admission to college.

Seth is very interested in biology. After school he works in one of the biology research laboratories at Amherst College. He said that people at the lab have given him a great deal of encouragement and he hopes one day to do biological research.

Seth is maintaining his work next year at a phase IV and V level. His courses are of an academic nature. There is no reason to believe that Seth will change his plans concerning college attendance. Next year, however, Seth is taking journalism and English at a phase V level. It may be that Seth is switching his allegiance from biology to writing.

Seth is quite confident of his intellectual abilities. It appears that he does not have any doubts about his ability to carry out his plans, whatever they may be.

Seth

Seth's performance on standardized tests indicates that he is an above-average performer on tests. Although relatively he does have some difficulty with numerical material, his scores in this area are still above average. He seems to be very talented in the verbal areas of ability. He will probably do very well in both English and journalism phase V, next year.

Seth has always been a successful student. His marks have been almost consistently A's and B's. In junior high school, where phase IV is the highest phase level, Seth was in all phase IV classes doing A and B work.

Seth missed the honor roll on two occasions this year. He received a C second term in history, and a C+ fourth term in Latin. Seth said that the honor roll, as it is now set up, is not very meaningful. He would like to see the honor roll work on a point system, similar to the one used in determining class rank.

Seth felt that biology was the most interesting course he had this year. Biology was challenging because questions did not always have obvious answers and because the classroom discussions were stimulating.

Seth was most bored by his Latin course. He said that the teacher did not make the subject very interesting. He feels that memorizing is tedious; moreover, "just about anyone can memorize if they want to." He indicated that having to use one's reasoning powers is a better test of ability. Seth enjoys classes where he can demonstrate his ability to reason.

Seth

Seth's marks have not shown any significant fluctuations either this year or in the past. He explained his C's and B-'s by saying that he often becomes bored and cannot bring himself to work as hard as he should in order to get better grades.

Seth has not done any formal independent study or research. He said that he reads a great deal outside of school and that he sometimes does experiments in the biology laboratory where he is employed. He has never bothered doing extra work for credit. His attitude seems to be summed up in this statement: "Why bother doing it for credit? Then you have to do it in some kind of prescribed way. When I'm interested in something I look into it. When I'm satisfied I look into something else. I'd have to study things more intensely to do good independent study."

Seth feels that the grading system is fair. When his marks are B-'s or C's he feels that they reflect his lack of effort and interest.

Seth is conscientious about doing his assigned homework. Most of his homework involves reading from texts and other sources and answering study questions. Seth feels that his homework is almost always valuable. Homework in his history class had some value only some of the time. Because the homework generally was not referred to in class he thought it lost a great deal of its usefulness.

Seth felt that almost all teaching methods, used properly, are valuable tools for learning. He did, however, feel that teachers often lead inappropriate discussions, and ask unnecessary questions, the answers to which are obvious.

Seth

Next year Seth intends to take seven academic subjects. English, journalism, and German will be at a phase V level. History, chemistry, algebra, and Latin will be at a phase IV level. Seth said that he based his phase placement decisions primarily on past marks. He felt that no particular person had been influential in his decision. His parents encouraged his decisions and his guidance counselor seemed to feel that his decisions were acceptable.

Seth is not involved in any school activities because he does not consider them important. He is a member of 4-H Club and is a group leader in that organization. He enjoys being a group leader and indicated that he liked helping the younger children with their projects. Seth has two friends, neither of whom are at the same phase level or socio-economic level as Seth. His primary extracurricular activity is reading. Last summer Seth took an enrichment program in algebra and physics at Smith College. He plans to take more courses this summer.

Seth had one detention this year which he was irate over. His detention was given because he forgot to bring in an absentee letter of excuse. Seth said that this was a minor infraction and that they could have called his mother to find out if he had played hooky. He feels that kids often do much more serious things and get away with impunity. Aside from this detention, Seth has not had any other behavior problems nor has he suffered any academic setbacks.

There are no recent teacher statements available on Seth's records. Elementary school teachers indicated that Seth was a good student, who was conscientious about his work. His sixth grade teacher said that he was bossy on the playground and had difficulty getting other children to play with him.

For some reason Seth has not met with much success socially. He has, however, experienced success as a student. It seems that in an attempt to achieve even greater success and recognition as a student, Seth has committed himself to a rather rigorous program of studies next year.

SETH

TABLE I

Term	Course																	
	English V			History IV			Biology IV			Geometry IV			Latin I IV			also Speech IV		
	*G	C	E															
1st	B+	1	1	B-	1	1	B+	1	1	B	1	1	B	1	1	A-	1	1
2nd	A	1	1	C	1	1	B+	1	1	B	1	1	B-	1	1	A-	1	1
3rd	A	1	1	B-	1	1	A-	1	1	B-	1	1	B-	1	1			
	B+	1	1	B-	1	1	A	1	1	B	1	1	C+	1	1			
Final	A			B			A			B			B			A		

* G: grade
C: conduct
E: effort

TABLE II

Methods of instruction in order of frequency

English V	History IV	Geometry IV	Latin I IV	Biology IV
Discussion Question & Answer Read & Recite	Discussion Group Research	Lecture Problem Solving Review of Homework	Read & Recite Question & Answer	Experience Projects Audio Visual Question & Answer
General Comments				
Purpose all of the time.	No purpose (much time wasted on discussion which does not directly deal with the topic of history.	Purpose all of the time.	Purpose all of the time.	Purpose all of the time.

TABLE III

SETH

Test Name	Date	SS	%ile	Norms
Otis Gamma	1967	133		
Otis Beta	1965	122		
Lorge Thorndike	1965	132		
Lorge Thorndike	1962	115		
DAT verbal	1966		97 %ile	
num			75 %ile	
abst			70 %ile	
cleric			60 %ile	
V & N			95 %ile	
mech			30 %ile	
spat			55 %ile	
spel			95 %ile	
gram			90 %ile	
Iowa grade 6	1964		grade equiv.	
voc			9.4	
read			8.6	
lang			8.8	
s. skills			8.0	
arith comp			8.5	
arith prob			7.8	
Iowa voc	1965		95 %ile	
read			98 %ile	
spel			93 %ile	
cap			99 %ile	
usage			75 %ile	
punc			99 %ile	
total lang			98 %ile	
maps			95 %ile	
graphs			85 %ile	
ref			96 %ile	
total WK st sk			94 %ile	
arith comp			78 %ile	
arith prob			91 %ile	
total arith			87 %ile	
composite			97 %ile	

Class of 1971, Phase V SUSAN
9th year

Extremely articulate, Susan maintains conversation at an adult level. Her frequent smile helped set the tone of all interviews and confirmed the first impression that Susan was a friendly and interested participant in the study.

Susan is new to Amherst. Her pre-college course of study consists of algebra, English and biology at the phase V level and Latin and U.S. History at phase IV. Thus far, she has maintained honor roll status with straight A grades. Her local friendships are relatively unformed, although she lists three local girls among her five closest friends and the friend she names as closest is in Amherst High School. Her extracurricular activities include Future Nurses of America, which she attends regularly.

Susan's father is a service worker at the university. Before retiring from the Army he earned a Bachelor of Arts degree. Her mother, a naturalized U.S. citizen, earned a Bachelor of Science degree from the University of Osaka and was a laboratory technician in the U.S. Army hospital in Japan. Susan cites the family joke that her father never had a chance; he was ill in the hospital when her mother met him and she caught him when he was in no position to fight back. There are three younger brothers in the family.

Susan has a record of only the usual childhood diseases. She has had more immunizations than the norm because of her world traveling as a military dependent. She requires eye glasses, which correct her vision to 20/20.

Susan was extremely poised in interaction with the interviewer and her behavior seemed more adult than adolescent. She appears to be quite intelligent and outgoing. At one interview she "turned the tables" on the interviewer by requesting that he participate in a public opinion poll she was conducting as an independent project for history. The poll concerned estimates of who presidential candidates would be, and which one the participant preferred to be the ultimate victor in the November elections. One important characteristic of Susan is her high level of interest in what is going on. She asked some penetrating questions about the meaning of several questionnaires and expressed an intelligent curiosity about the survey.

Although limited in the number of firm friends she has in the area, she apparently becomes acquainted easily, as the interviewer has seen her in the company of a number of different girls as he passed her at various times in the school corridors. Rarely was Susan without a smile, and she was usually engaged in animated conversation. Susan evidently likes her family, and she enjoys the few friendships she has made. Her appearance and behavior seem to indicate self confidence and self respect.

Susan plans to pursue a full pre-college curriculum in high school to include Latin, French, English, the histories, mathematics at least through algebra, and the natural sciences. As this is only her first year in high school, she has not yet established course continuity, but her present achievement level and past history of excellent school work suggest she would probably pursue any courses with success.

Currently she expresses an interest in college training in nursing, which also includes her vocational goal. Susan states she has desired nursing since she was in the fifth grade. She attributes maternal influence as having some effect on her choice. Her educational goals have undergone no changes since junior high school. Susan states she has wholehearted parental endorsement of her goals.

As mentioned above, Susan's mother's pre-marital occupation had some influence on Susan's own vocational choice. That both her mother and father are college graduates also influenced her choice, she states. She chose her curriculum and phase levels but secured her parents' complete concurrence with the choices. She acknowledges help from the school counseling service in explaining the phase concept, which was new to her.

Standard test scores available for the years 1964, 1965, and 1966 show a consistent Otis IQ of 128. She scored in the 99th percentil of all sections of the SAT for the past two years and did equally well in the Otis Quick Scoring Test in 1965. Her stanines were all 9's. It would appear that Susan's indicated ability plus her stated ambition makes the realizations of her goals likely. See Table III for standardized test scores.

Susan's grades in all subjects from third grade to date are Satisfactories, or A's and A+'s, with the latter amounting to more than 60 percent of the total. Her grades for the current year are shown in Table I.

Susan

Susan has been on the honor roll regularly. She is proud to be there and says, "It's an indication of good grades; that's good for college admissions." She feels there is little prestige to being named to the honor roll, as anyone can achieve the distinction under the phase system.

Susan simply could not name a preferred subject, nor a least liked one. Under probing, she maintained her assertion that she had neither pronounced preferences nor dislikes for any courses. She insisted "I just like school." Her only complaint was that she did not like pop quizzes in any class, even though they apparently represent no significant threat to her.

Susan engaged in independent study projects in biology, history, and English. All were suggested and supported by the respective teachers. She states she enjoys the self direction and motivation required for successful completion of such projects. In biology, phase IV, she completed the biological classification of four organisms according to species, phylla, etc. Early in the year she expressed an interest in genetics, which relates well with this project. For history, she conceived and conducted the opinion poll. For English, she was urged to write a criticism of Poe's short stories.

For her biology project, she expected and received a grade of A. The task required some laboratory examination of the chosen organisms and it also was necessary for her to engage in some research, both current and historical. Her English project required her to read several representative short stories by Poe, and some criticism. Following the preparatory work, she had to write her own analyses and criticisms of the stories. For this no grade was expected and none was given. She said that she could see that the reward was in the doing. Her poll also was undertaken without expectation of a grade. It seemed apparent that she felt some excitement over working on her own, and in doing a good job, whether with or without a grade.

Susan expressed the belief that the value of homework, as used in Amherst, rests in the fact that, if you don't do it, effective class participation is impossible. She mildly disapproved of the biology homework, labeling it "busy work" because the teacher did not collect it consistently. On homework, she does not necessarily want a grade but seems to want a checkoff at least to acknowledge her efforts.

She estimates she spends two and one-half to three hours daily in home preparation. She rates only algebra homework as "usually valuable" and rates the homework in her other four subjects as having "value most of the time." She gives the impression that her studies, at home or at school, are her principal and most enjoyable diversions.

Table II indicates the methods of teaching encountered in her several classes, in order of importance. Susan generally approves the methods in algebra, biology, and Latin as they are "purposeful all of the time." She rates English and history teaching methods as "purposeful most of the time." She was unable to explain why she differentiated the latter two subjects from the others.

Susan

Susan is involved in Future Nurses of America as a regularly attending member. The activity has a definite relationship to her educational and vocational goals. Susan also is involved as a Sunday school teacher of the United Church of Pelham. This would seem to represent a significant degree of sophistication for a fifteen year old girl, and indicates a willingness to accept responsibility.

There is ample evidence of teacher opinion of Susan in her recent school records. From records of parent-teacher conferences some of the following quotations: "...this conference like the last, I could only sing Susan's praises;" "She is without a doubt the most outstanding student in my home room;" "...a fine student, a pleasure to teach;" "...a perfectionist, a challenge for any teacher, and a pleasure...." Such laudatory comments represent year-to-year entries in Susan's record, indicating continuity of achievement excellence.

It is believed the Amherst-Pelham phase system presents an excellent environment for the intellectual and social growth of so promising a girl. The school enables her to progress at her own pace, which is an opportunity she takes advantage of. This school would seem to be an enhancing and liberating environment for Susan. It is believed she will maintain the progress of her school success to the ultimate accomplishment of her goals.

TABLE I

Term	Course														
	English V			Algebra V			Biology V			Latin IV			History V		
	*G	C	E												
1st	A	1	1	A	1	1	A	1	1	A	1	1	A	1	1
2nd	A	1	1	A	1	1	A	1	1	A	1	1	A	1	1
3rd	A	1	1	A	1	1	A	1	1	A	1	1	A	1	1
Final	A			A			A			A			A		

* G: grade
C: conduct
E: effort

TABLE II

Methods of instruction in order of frequency

English V	Algebra V	Biology V	Latin IV	History V
Discussion	Discussion	Lecture	Read & Recite	Discussion
Question & Answer	Problem Solving	Question & Answer	Written Translation	Question & Answer
Independent Research	Question & Answer	Laboratory Research	Audio Visual	Group Research
		General Comments		
Purpose all of the time.	Purpose all of the time.	Purpose all of the time.	Purpose all of the time.	Purpose most of the time.

TABLE III

SUSAN

Test Name	Date	SS	%ile	Norms
Otis QS	9/64	128	99 %ile	Nat'l
Standford Ash. Test	9/65	128	99 %ile	"
Standford Ash. Test	9/66	128	99 %ile	"

Class of 1970, Phase II
10th year

BETTY

Betty is an attractive sophomore with long, reddish brown hair. She is always well dressed and neatly groomed. During the first interview, Betty seemed very nervous but as time elapsed she appeared to relax although she was never completely at ease. Her responses to questions were direct although she offered no extra information.

Betty is a phase II student. Her subjects include English, business arithmetic, junior business and speech (although she took this for only half of the year, which is normal procedure). Biology is her only phase III subject. The only subject in which Betty has consistently done well is English. She earned a B for the first and third terms and an A for the second compared with D's in biology, her most difficult subject. In other subjects, Betty ranged between B's and C's. Her conduct and effort is usually 1 (refer to Table I).

Betty's father works in a nearby factory and her mother is a housewife. Both parents did not complete high school. An older brother, an older sister, and a younger brother complete Betty's family. Her older brother is a senior at Amherst Regional High, her sister is a freshman at the University.

Betty weighs 111 pounds and is five feet four inches tall. As a child she suffered no unusual diseases. Presently she is in good health.

If Betty had her way, she would work rather than stay in school.

Betty

Although she knows that school is the way to "get ahead" she really does not enjoy it. "I can't study" is her major gripe. On the other hand, Betty says that she liked the phasing program "because everyone can work at his own ability." She also believes that the students in the higher phases do not "look down upon" students in the lower phases. She believes that by taking part in school organizations, a feeling of "being equal" results (i.e., being equal to students in higher phases).

Betty said that she usually does not confide in her parents. Furthermore, she and her older brother do not get along well with her sister. "I'm not exactly crazy about family life."

Betty also lacks confidence in herself. "I'm just dumb; I just can't understand things; I'm not as smart as my brother" are the reasons she offers for mediocre performance in school.

Betty has signed up for Shorthand I, Typing I, bookkeeping, U.S. History and English for next year. In English, history and typing Betty is taking a higher phase, although typing is a repeat subject.

After high school, Betty wants to become an airline stewardess or, if she does not succeed at that, she would become a secretary. She does not believe that she has the sbility to succeed in college.

Betty admits that her phase selection is influenced most by the counselors. "They suggest the phase" and she feels that their judgment is good. No one else seems to influence her choice.

On the other hand, her future plans are most influenced by her friends. "We talk about the future every so often, but at home my parents don't seem to care." When the interviewer probed her more about how friends influence her she was not able to elaborate.

Betty's standardized test scores are average on mental ability (50th percentile). She scores consistently below 50th percentile on aptitude and achievement tests. (Refer to Table III).

In elementary school Betty did average work which ranged from satisfactory to needing some improvement. In the ninth year she did fair work earning B's in English and U.S. History, C's in unified science and home economics and a D in typing.

Betty has not been on the honor roll at all this year; she does not feel that it is important. Her comment was simply "there's no big thrill about it." She maintained that some of her friends think it's important to be on the honor roll while others do not.

Betty's least liked subject is junior business "because it's boring; it's similar to business math." On the other hand, gym is her favorite subject because "it's easy and fun. I like sports."

Betty believes that the grading system used by her biology teacher is good: "Although he's hard and wants the exact answers, he's fair and gives you the mark you should get." She also thinks that junior business is good for the same reason. She considers that both English and typing have poor grading systems: "In English it's too easy and in typing it's not only hard, it's stupid."

Betty

Her homework in English is usually valuable "because I do enjoy reading." Biology is valuable "because I think that it's interesting to study about animals and things." Conversely, her business arithmetic homework is not pleasurable to her because she dislikes doing problems. There is no typing homework.

It is the opinion of the interviewer that Betty is in a phase compatible with her standardized test scores and grades but she does vary to some degree in her performance. The reason for this inconsistency is that she has not been sufficiently motivated. She has ability but lacks confidence.

Betty's only participation in school or community organizations was as a member of the girls' basketball team this year. In her spare time she babysits and enjoys playing pool with her older brother and a girl friend.

She and her steady go to dances and movies. Last summer she had a part time job picking cucumbers for a local farm. Her friends come from basically similar backgrounds and are in phases II and III like Betty.

Betty received warning cards in biology for lack of interest and lack of work. In business math she received one for her lack of effort. She managed to get into difficulties in school by skipping school twice; both time she received a detention. She and her parents thought the first action was fair, but the second time her parents knew nothing of the infraction. Betty also forged a note and was caught using an old pass. For both these infractions she received a detention and again both she and her parents thought the detention in order.

Betty

Her teacher commented that "Betty could be a much better student if she paid attention and applied herself; she is an average student, but her enjoyment lies in fooling around in class." Betty has not settled down to serious work, perhaps a result of her lack of self-confidence and the school's inability to motivate her.

The phasing program has pleased Betty without motivating her to work at top capability.

BETTY

TABLE I

Term	Course: English II			Business math II			Biology III			Junior Business II			Speech II			and Typing X		
	*G	C	E															
1st	B	1	1	C	1	1	D	1	2	B	1	1	B	1	1			
2nd	A	1	1	C	1	1	D	1	1	C	1	2				B	2	1
3rd	B	1	1	B	1	1	D	1	2	B	1	1				C	2	2
Final	B			C			D			C			C					

* G: grade
C: conduct
E: effort

TABLE II

Methods of instruction in order of frequency

English ph II	Bus. Math II	Biol ph III	Jr. Bus. II	Speech II
Discussion Group Research Read & Recite	Problem Solving Read & Recite	Experience Projects Discussion Audio Visual	Read & Recite Discussion Problem Solving	Speaking (talks) Audio Visual Discussion
General Comments				
"It's poor. She makes us feel like little kids, she asks a lot of dumb questions."	"It's good. She makes sure you understand it."	"It's fair because he doesn't care if we don't follow. It's our tough luck."	"It's good. It's the same approach as business arithmetic."	"It's good. I enjoy speaking in front of the class."

also Typing ph. X:
method: Typing
comment: "It's poor. She won't let us ask any questions."

BETTY

TABLE III

Test Name	Date	SS	%ile	Norms
Otis QS Beta	9/64	100	50 %ile	Nat'l
Otis QS Gamma	9/66	99	47 %ile	"
DAT verbal reas	65	16	45 %ile	"
Num Reas	"	16	40 %ile	"
UR & NA	"	32	40 %ile	"
Abst. reas.	"	15	20 %ile	"
Cler sp & acc	"	38	35 %ile	"
Mech Reas	"	39	70 %ile	"
Space Rela	"	12	15 %ile	"
Spelling	"	37	3 %ile	
Grammar	"	21	35 %ile	"
Iowa Tests	9/64			"
Vocab			2 %ile	
Lang. Skills			29 %ile	
Work St. Sk.			38 %ile	
Arith Skills			28 %ile	
Composite			19 %ile	

Class of 1970, Phase III, II ALLEN
10th year

Droopy eyelids, freckles and reddish brown hair combine to give Allen the look of a perpetually sleepy boy. On the whole he is neat and well dressed. His favorite topic of discussion is his dislike of a few subjects. He often complains about being put in a phase with "stupid kids," which he claims makes him look stupid. Yet Allen has always been more than willing to provide any information he could and answers questions to the best of his ability.

Allen's phase levels are varied: English and Algebra, phase II; German, Science and U.S. History, phase III. His grades fluctuate from term to term.

Although he is a big boy -- 175 pounds, six feet tall, Allen has had health problems throughout childhood. When he was five years old, he had a contagious disease but with treatment he quickly overcame this. He presently has a thyroid condition and is on medication.

Both of Allen's parents are high school graduates and his father, who was formerly in the Air Force, received additional schooling during his tour of duty. He is an administrator at the University at present. The family has lived in Germany, Morocco and Wyoming so Allen is well traveled.

Allen's attitude towards a few teachers and students in his classes is quite negative. "I don't like being in class with a bunch of dummies." He also feels that the teachers in his algebra and English classes think that he is not bright.

On the other hand, Allen's attitude towards his family, especially his brothers, is very positive. "I'd like to go to college like my brothers. This would please my parents a lot." His brothers, who are both in military colleges, have a tremendous influence on him. Often when they come home, Allen talks with them about his chances of going to some comparable institution. "I do also talk to my father about college but not that much."

Allen's plans for next year include taking four phase III subjects--English, history, humanities and German--one phase II geometry course.

After high school he plans to become either a "pro basketball player" or a "space man," but "even though I'd like to be either of those, I do want to go to college really."

His confidence is not overwhelming. "If I work harder the next two years, I'll probably get into some college." His plans of going to college seem to stem from his older brothers. His desire to please his parents also influences his decision. Teachers, counselor and friends have little impact on Allen's plans.

The scores on his standardized tests are somewhat below average. His retests score for the Otis Gamma was 94 which is below the 50th percentile for the nation. On the WIS in 1965 he earned a total score of 93.

Last year, Allen earned D's in German, algebra, biology and English, a C in speech, and a B in Ancient History. This year's grades are better. The improvement can be seen in Table I.

Allen

Although Allen has not made the honor roll this year he does consider it important to be on it. "I think that by being on the honor roll, you are more popular, and it helps you get into college."

History is Allen's least liked subject because "the grading system is really hard." German is his most enjoyable subject "because I enjoy speaking another language, especially German. I really loved being in Germany and by learning how to speak, I'll be able to go back and get along better." "I also think the teacher is great, it's really explained good."

Allen's marks this year have fluctuated from term to term. The most interesting grade change came in science when he went from a D to a B+ between the second and third terms. Allen explained that "I just worked much harder because the teacher sort of pushed me."

When asked about homework, Allen said that the homework in history, algebra and German was very difficult, although once in a while English is just busy work.

Allen's phase placement is done mostly by the counselors and vice principal at the school. Generally he agrees with their selections although he thinks that by being in lower phases he will be labeled a "dummy" like the other students in these courses. He said that neither his friends nor the teachers play any role in his phase placement. His parents do know which phase he is in, but they do not discuss the matter to any great degree.

Allen was in the Pep Club, CYO and was a member of the golf team. He mentioned that his attendance was regular in each organization but that he did not hold office. His spare time hobbies include model racing (cars). Allen does not date; however, he said that he would have time for "that sort of thing later." Most of his friends are in the same phase and come from comparable socio-economic backgrounds as Allen.

Although Allen earned three D's this year, he was given no warning cards. He did become involved in a fight with another student during the first term this year. Both Allen and his parents thought that the administrative action taken--lost of his privilege pass--was fair. It is possible that Allen viewed school as more threatening as a result of this fight, i.e., some students are against him. Allen said, "this guy thinks he can handle anybody."

Although some of the teachers commented "Allen doesn't pay attention in class, nor does he take notes all the time;" "he needs a lot of confidence;" or "he has a low level of concentration," there was agreement among some teachers and counselors that Allen is very cooperative and has average ability.

In summary, Amherst Regional High School's phasing program provides a conflicting atmosphere to Allen. On the one hand he sees some teachers and students as a threat to his identity and ego. On the other hand Allen enjoys school because phasing "gives me the opportunity to do better." There is no doubt that the phasing program has helped Allen find out what he can do--what amount of work he can accomplish well. At the same time, however, he does have the problem of not wanting to be labeled a "dummy" by the other students because of the phase II classes.

ALLEN

TABLE I

Term	Course														
	English II			German III			Algebra II			Science III			U.S. HistIII		
	*G	C	E												
1st	B	1	1	B	1	2	D	1	2	C	1	1	B	1	1
2nd	B	1	1	B	2	1	D	1	2	D	1	1	C	1	1
3rd	C	2	2	C	2	2	C	1	2	B+	1	1	C	1	2
Final	B			C			D			C			B		

* G: grade
C: conduct
E: effort

TABLE II

Methods of instruction in order of frequency

English ph III	German ph III	Algebra II	Science ph III	U.S. Hist III
Discussion Group Research Question & Answer	Read & Recite Audio Visual Discussion	Problem Solving Read & Recite Question & Answer	Question & Answer Lecture Audio Visual	Discussion Lecture Audio Visual
General Comments				
"I'm not really prepared to answer the questions the teacher presents, but it seems pretty good."	"We don't really discuss anything, but when it's explained, I usually see what's meant, like grammar"	"I enjoy the way the teacher presents the problems, I understand the way it's explained, " it's good."	"Sometimes he lets us do too much of the work alone; I'd say it's fair."	"The subject isn't that interesting to me anyway so I don't like the way it's taught."

TABLE III

ALLEN

Test Name	Date	SS	%ile	Norms
WIS U	11/65	104	not avail.	Nat'l
P	"	83	"	"
T	"	93	"	"
Otis QS Gamma	9/66	86	12 %ile	"
*				

*No other information is available, as Allen is a recent transfer student.

Class of 1970, Phase III GAIL
10th year

Gail's quiet, even shy behavior was apparent at each interview. She was born in August 1952, is about five feet tall and weighs approximately 98 pounds.

Gail is in the class of 1970 and is pursuing a traditional curriculum of English, biology, ancient history, and French at phase III levels, algebra at the phase II level. At her chosen levels, she is maintaining B grades. She stated that her parents are aware of her phases and object only to the II level course. They believe she can maintain achievement at a higher phase level. Gail states she believes she can do better in all her subjects with the exception of ancient history in which she earned a C. She said her parents concur with that assessment. Probing to learn why she chose phase III elicited only shoulder shrugs. Differential Aptitude Test scores, shown in Table III, indicate that she is achieving on a comparative level.

Gail is next to the youngest of five children of a professor at the University of Massachusetts. Her mother, a housewife, is also a college graduate. Her older brother is a graduate student, an older sister is a school teacher, another older sister is now in college and a younger sister is in the sixth grade. There is a definite family orientation toward higher education.

Gail appears to have had the usual childhood diseases and to have received the customary immunizations. A medical record indicates she must wear glasses for reading and there is a further notation that states "five concussions--if a bad fall, apt to lose consciousness." There is no further evidence available concerning the history of these concussions and there is no record of excessive absences during her school career.

Most noticeable aspect of Gail's interview behavior was reticence. She supplied terse answers to questions only, adding no unsolicited information.

Gail, when scheduled for an interview following the third term, finally appeared after failing to keep several appointments. At this time she stated she would no longer participate in the study. She added, "My parents say I don't have to." The interviewer assured her there was certainly nothing mandatory about participation. Pressed for a reason, she stated "There's nothing in it for me." She would not be persuaded to continue and was not interviewed following the mid-term.

There is a continuous entry in records of parent-teacher conferences referring to Gail's shyness. Her mother was quoted by the fourth grade teacher as saying she was "very shy." Following this initial entry, there were similar comments to the same effect in ensuing reports. Several references were also made to her being "very nervous" but only in group participation situations. Her sixth grade teacher described her as "almost withdrawn." There seems to be a definite pattern of preference for working alone.

Gail was not definite about life plans. She "guesses" she will continue her pre-college curriculum at phase III level; she guesses she might go to college. She would not make a positive commitment to any plan, either for high school or for later years. Questioning failed to elicit any reason for her apparent indecision.

It seems safe to infer Gail lacks interest and confidence in her current activities. She seems to be attending school without any real purpose. One teacher noted, "Is capable, effort inconsistent."

There are no indications of excessive assistance with or emphasis on planning. Gail asserted that her parents knew her phase choices and generally approved them. She appears to prefer to go her own way without interference, assistance or question.

It is difficult to relate standard test results to plans where there are none apparent. If it may be inferred her plan is to drift along at the present level of academic challenge, it seems safe to predict her ability to do so. Available test scores are included in Table III.

Gail has maintained average grades throughout elementary school at the C and B achievement level. She has been an undistinguished student, albeit not a failing one. She states it is unimportant to achieve honor roll standing and added it is not important to earn the best mark one is capable of earning.

Without elaboration Gail names ancient history as the course she likes best. She liked French least describing it as "kind of boring," again without further elaboration. Gail's grades remain at B and C level, varying only occasionally when B's and C's are alternated from term to term. If a B becomes a C in one subject, she tends to convert a C to a B elsewhere.

Gail alleged she was "going to do" an independent study report for ancient history, but at the time of the interview, had no definite plans for such a report. Follow up on this was precluded by her dropping out of the study.

She described her homework as having "value most of the time." Her English homework, for example, made her "think." She rated all her teachers' methods as having "Purpose all of the time." See Table II for information.

Gail has achieved satisfactorily in her chosen phases. For next year, she has elected English, U.S. History, chemistry, geometry and French III at the phase III level. The only change is her up-phasing geometry to III from her algebra phase of II. This might be in deference to her parent's feelings, which were previously indicated.

Gail is a member of the Art Club, attending meetings occasionally. She claims no other affiliations.

Her records indicate she has never had any disciplinary nor academic problems.

Her elementary teachers found her a hard worker, without gaining distinction. Her fifth grade teacher described her as a "quiet, conscientious worker," but her sixth grade teacher noted she "does not exercise best effort." Other opinions referred to her shyness, and were cited earlier in this report. There were no comments available from junior high school teachers nor were any obtained from high school teachers.

Gail never developed enthusiasm for the evaluation study nor was the interviewer able to motivate her. Boredom rather than hostility seemed to typify her behavior. It would appear her attitude toward school is one of engagement without commitment. The interviewer received the impression that Gail was marking time.

The Amherst Regional High School phase program could be permitting her to choose secure levels of participation so that she can avoid commitment. Counseling might be of value for Gail.

GAIL

TABLE I

Term	Course																	
	English Phase III			Speech Phase III			Ancient Hist Phase III			Biology Phase III			Algebra I Phase II			French II Phase III		
	*G	C	E															
1st	C			B			A			C			B			B		
2nd	C			B			B			C			B			B		
3rd	B			B			C			C			B			B		
Final	B						C			C			B					

* G: grade
C: conduct
E: effort

TABLE II

Methods of instruction in order of frequency

English Phase III	Ancient Hist Phase III	Biology Phase III	Algebra I Phase II	French II Phase III
Discussion Question & Answer Read & Recite	Discussion Audio Visual Experience Projects	Discussion Group Research Question & Answer	Discussion Problem Solving Question & Answer	Read & Recite Question & Answer Discussion
General Comments				
Good	Good	Good	Good	Good

GAIL

TABLE III

Test Name	Date	SS	%ile	Norms
Otis QS Beta	9/64	116		
Otis QS Beta	9/66	113		
DAT	9/65			
VR		34	90 %ile	
NA		13	25 "	
VR & NA		47	75 "	
AR		28	45 "	
Cl Sp & Acc		39	40 "	
MR		33	40 "	
SR		20	50 "	
Spell		71	70 "	
Grammar		22	40 "	
Iowa Basic				
V		78		
R		91		
L 1		78		
L 2		92		
L 3		84		
L 4		89		
L		86		
W 1		83		
W 2		71		
W 3		88		
W		81		
A 1		62		
A 2		69		
A		66		
C		80	77 %ile	

Class of 1970, Phase III-IV MARK
10th year

Mark is cool, calm, and collected, always impeccably dressed, in casual Ivy League style clothing. He exudes self-confidence, almost sophisticated in its polish. When the interviewer first discussed the evaluation project with him, Mark rather disdainfully informed the interviewer that he had been asked to take some tests and answer some questions last year. When the interviewer told him that he had been singled out as being representative of a certain portion of the student body he seemed flattered, and after further discussion he decided that he might have an important contribution to make and would cooperate in the evaluation project.

Mark, a sophomore, is taking English and French at a phase III level and history, biology, and geometry at a phase IV level.

Mark's father, who is a college graduate, is a building contractor. He is presently working on several of the new commercial buildings in Amherst. Mark's mother does not work outside of the home. She is also a college graduate and very interested in seeing that Mark and his two brothers receive a good education.

Mark has a rather serious allergy to bees and wasps and requires immediate medical attention if he receives a sting from these insects. He is in good physical condition. He added three inches to his stature this year and is now five feet seven inches and weighs about 135 pounds. Aside from his allergy to bee stings, Mark has no known health problems.

Mark

Mark seems to be socially oriented. He enjoys gaining acceptance from his peers and has a rather large circle of friends. He seems to have a cynical attitude toward school and toward adults in general. There is little that seems to excite Mark. He maintains a rather blasé attitude toward school and life in general. He seems to be sure of himself in both the social and academic spheres.

Mark is pursuing a course of studies that is academic in nature. He seems to feel that it is social suicide to pursue any other program of studies. College is in his future because he cannot think of anything else he would rather do. He does not have any particular vocational plans or subject major in mind. Mark feels sure that he is capable of continuing to do well in his courses in secondary school and that he will be able to meet the college entrance requirements.

He has received encouragement from home about pursuing a course of studies that would lead to college admission. He consults with his friends and guidance counselor, checks school requirements and then makes his own decisions.

Mark's test scores are somewhat inconsistent when compared with his achievement in school. Test scores indicate that he is a student of slightly above average ability, yet his school achievement is generally well above average. Perhaps Mark has carried his blasé attitude into the test taking situation and has not performed on tests according to his actual ability.

Mark

Mark's grades throughout school have generally been somewhat above average, more B's than C's. A's and D's have been rare on Mark's record.

Mark said that he likes to be on the honor roll for his personal satisfaction of having the ability to get A's and B's. He does not consider making the honor roll an honor nor does he feel that making the honor roll is impressive to others. Mark said that he and most of his friends are not impressed when one of them makes the honor roll. The last two marking periods of this year, he was unexcited about being on the honor roll but was pleased with his marks.

Mark said that he liked biology better than his other classes because the subject matter was interesting. He was apathetic about not liking French. He did not mind the subject--just did not like the teacher.

Mark has not been involved in any independent study this year although he indicated that he would probably do independent study if a subject sufficiently aroused his curiosity. Thus far, he has learned all that he wanted to learn in his regular studies.

Mark feels that his grades usually reflect an accurate assessment of his work and if anything err on the plus side. Mark said that he had put little effort into his work during the second marking term yet he got higher marks than he expected.

Most of Mark's homework consists of reading and answering questions--tasks which rarely require more than an hour a night. The only homework Mark felt was of little value was his French homework because "memorizing and going over drill is very boring."

Discussion, reading and reciting are the primary methods of instruction in English. Mark found these methods purposeful all of the time. In history, Mark mentioned the same teaching methods yet felt these methods served no purpose in this class. Mark's judgment seems to be actually based on an initial preference for particular classes or teachers.

Mark has been in phase III and phase IV classes throughout high school. Next year he plans to take all his courses at a phase IV level because he feels that he has the ability to do the work. Moreover, Mark believes that all phase IV classes will improve his social status and also improve his chances of admission to a "good" college. He doesn't really know whether anyone agrees with his decisions about phase levels or his course selections because he has not consulted anyone.

Mark attends most of the school's social and athletic functions although he is not a member of any of the many clubs and organizations. According to Mark, he and his friends are popular without benefit of these groups which are too time consuming and not much fun anyway.

Most of Mark's friends are at the same phase and socio-economic levels as Mark. They enjoy many informal parties and gatherings.

School has been generally a pleasant experience for Mark. Teachers seem to like Mark. Comments that are available are "friendly" "well liked" and "cooperative." He has done surprisingly well academically, when his test scores are considered. Mark does not give the impression that he is particularly motivated in an academic direction. He indicates that too much studying is a grind, yet paradoxically does above average work with only average test scores.

The ungraded system has not catagorized him and forced him to work at a particular level. He has been allowed to progress at his own rate. He is anxious to move up, for whatever reasons, and is willing to do the work necessary at a higher level.

Mark does not seem aware nor should he be aware that he has only average or slightly better than average performance on tests. He has not been treated as if he were only an average student and perhaps because of this has achieved a better than average record.

MARK

TABLE I

Term	Course														
	English III			Mod Hist IV			Biology IV			Geometry IV			French III		
	*G	C	E												
1st	B-	1	1	C	2	1	B+	1	1	B+	1	1	B-	1	1
2nd	B-	1	1	B	1	1	B	1	1	B-	1	1	C+	1	1
3rd	B	1	1	B-	1	1	B	1	1	B	1	1	B-	1	1
4th	B	1	1	B-	1	1	B+	1	1	B+	1	1	B+	1	1
Final															

* G: grade
C: conduct
E: effort

TABLE II

Methods of instruction in order of frequency

English ph III	Hist. ph IV	Biology ph IV	Geometry ph IV	French ph III
Discussion Read & Recite	Discussion Read & Recite	Discussion Lecture Experience Projects	Lecture Problem Solving	Question & Answer Audio Visual (tape recording)
General Comments				
Purpose all of the time.	No purpose.	Purpose all of the time.	Purpose all of the time.	Some purpose most of the time.

TABLE III

MARK

Test Name	Date	SS	%ile	Norms
Otis Beta	1964	107		
Otis Gamma	1966	103		
DAT verbal	1965		70 %ile	
num			20 %ile	
U & N			45 %ile	
Abst			70 %ile	
Cl			25 %ile	
Mech			55 %ile	
Sp Rel			60 %ile	
Spel			50 %ile	
Gram			45 %ile	
Iowa	1964		63 64	
V	1963		73 %ile 78	
R			70 37	
			75 71	
			69 68	
			72 93	
			72 71	

Class of 1970, Phase IV CLARK
10th year

Clark is a small, rather frail looking boy. His speech and poise are above average for his age so he has no difficulty in communicating with people. Upon first meeting with Clark, he is obviously intelligent, articulate and serious.

Clark is a phase IV student in geometry, biology, German and modern European history. His only phase V course is English.

Clark's father is a plumber and his mother is a homemaker. Both parents are high school graduates. The family is rather large, including Clark's older sister who is a senior in high school and four younger brothers.

Although Clark is not a very strong or large young man, he is in good health and has had only the normal childhood diseases.

Clark has a good attitude toward his family, friends and school. Although he enjoys being a member of a large family, he does believe that "three children in the family is ideal, because each child gets to know the others better." He enjoys school considerably because, as he says, "learning is fun." He also said that "the only way to really get ahead in life is by staying in school and doing well." Clark also likes being in school because he can meet his friends.

Basically, Clark has selected his own phases and courses although he discusses his plans with his parents and often consults with his guidance counselor. He has focused his attention on science and languages and plans to major in a language, biology or history in college. There have been no deviations from his plans since he entered high school. He will probably have no trouble achieving his goals: he is a hard worker with high ability.

Clark's plans for courses and the future are realistic when one considers his marks on standardized tests. His mental ability scores are very high and he scored in the 90th percentile on four out of eight categories on the Differential Aptitude Tests.

Clark's past grade history is rather impressive. His average grade for any one year is about B+. To illustrate, in the ninth year he earned three A's and four B's for final grades and each course was phase IV, with the exception of one phase V subject.

Although Clark has been on the honor roll each term this year, he says that it is not important. "I don't feel that the honor roll gives me any real distinction; I'm just satisfied to know that I'm doing well."

Because English is his favorite subject, he feels that he should do well in it. He enjoys English because he finds reading novels and plays interesting and finds ensuing discussions pleasurable. On the other hand, he finds geometry "very boring," because "there are too many rules to learn."

Clark feels that the systems of grading are generally fair in his five courses although "more emphasis should be put on grading recitation in German." The description of his homework consisted of textbook reading for biology and German, study questions in geometry and outside reading and essays in English and modern European history.

Clark's extracurricular activities include the Outing Club, Rod and Gun Club, Ski Club, Boy Scouts and Pilgrim Fellowship. Also Clark said that he reads a good deal, especially historical novels and periodicals such as *Look* and *Life* magazines.

Clark does not date but he does keep company with friends from school. His jobs include part time summer work such as raking and mowing lawns. His friends come from socio-economic backgrounds slightly higher than his.

In general, his teachers believe that Clark is a very able and competent young man. They feel that his effort and conduct are excellent and that with his fine record he should have no difficulties being accepted to a good college.

Amherst Regional High School is providing the challenge Clark needs in order to function at the peak of his ability. The school has allowed him to take the greater part of the responsibility for directing his own educational program. Although he relies on the judgment and knowledge of others he does make the final decision in course selections and future plans.

TABLE I

Term	Course																	
	English Phase V			Geometry Phase IV			Biology Phase IV			German Phase IV			Mod Eur Hist, IV			Speech Phase IV		
	*G	C	E															
1st	B	1	2	A	1		B	1		A	1	1	A	1	1			
2nd	B	1	1	B	1		B	1		A	1	1	A	1	1			
3rd	A	1	1	B	1		B	1		A-	1	1	A-	1	1	A	1	1
Final	B			B			B			A			A			A		

* G: grade
C: conduct
E: effort

TABLE II

Methods of instruction in order of frequency

English Phase V	Geometry Phase IV	Biology Phase IV	German Phase IV	Mod Eur Hist, IV
Discussion Question & Answer Audio-Visual	Problem Solving Read & Recite Discussion	Experience Projects Audio-Visual Discussion	Translation Read & Recite	Read & Recite Discussion Audio-Visual
General Comments				
"This method is good, because we have interesting discussions about the books we read."	"This method is conventional, there isn't much the teacher can do with this subject; it's too mechanical."	"The method has purpose all the time, because we not only learn through books, but we experience things in the lab."	"It's good because it's fun to speak and read German."	"I enjoy the discussions the most, because we're allowed to give our own opinion."

TABLE III

CLARK

Test Name	Date	SS	%ile	Norms
Otis QS Beta	9/64	130	99 %ile	Nat'l
Otis QS Gamma	9/66	131	99 %ile	"
DAT Verbal Reas.	65	47	99 %ile	"
numerical	"	22	75 %ile	"
UR & NA	"	69	99 %ile	"
Abstract reas.	"	35	75 %ile	"
Cl. sp. & acc.	"	35	45 %ile	"
Mech. Reas.	"	55	95 %ile	"
Space Rela.	"	43	95 %ile	"
Spelling	"	98	99 %ile	"
Grammar	"	45	99 %ile	"
Iowa Tests	9/64			"
Lang Skills			99 %ile	
Wk St. Skills			99 %ile	
Vocab			79 %ile	
Arith			92 %ile	
Reading			99 %ile	
Composite			99 %ile	

Class of 1970, Phase IV DALE
10th year

Dale is an attractive girl, 65 inches tall, weighing 115 pounds. She was a pleasant, intelligent, and cooperative although somewhat uninterested, participant in the project. She volunteered very little in the way of observations on the Amherst scene, and chiefly confined herself to responding to questions as presented to her.

Dale is in her tenth year of school. She is a good student, who earned three B's and two A's at a four and five phase level last year. This year she earned three A's and two B's at an all phase IV level. Teacher comments in her record indicate she has been a consistently "excellent" student throughout her school history. She intends to complete her pre-college high school curriculum and then to attend the University of Massachusetts. She has made no vocational decision as yet.

Dale is the younger of two children; she has an older brother who graduated from high school but who has not taken any advanced education. Her father has an Associate's Degree and is employed as a technical assistant at the University. Her mother graduated from a commercial college and is a housewife. The family reads local newspapers, Life and Better Homes magazines.

Dale suffered only the usual childhood diseases. She received the normal immunizations. She has a strikingly good complexion which enhances her attractiveness. She gives the impression of being a small girl although height and weight belie this impression.

Throughout the series of interviews, Dale participated in a friendly, but uninterested way. She was aware of the reasons for the survey and was willing to be part of the sample but she had no real interest in doing so. She would have surrendered her place to anyone who might have claimed it. She seemed relatively composed and has apparently acquired social maturity. She is quite involved in Tri-S, a girls' service club at the school.

Dale's immediate plans call for her to complete high school and then college. She is not sure of what work she would like after school; moreover, she had no real idea of what her college major may be. In her own words, "I'm just sort of drifting along."

Dale plans to continue her pre-college curriculum at the same (4) level. She is down-phasing in mathematics for next year, claiming it is just a bit more difficult than she is interested in.

Dale gives the impression that she knows what she is about; that she will quietly do precisely as she has indicated she will do. There is an air of quiet determination in her. She credits her counselor, teachers, and parents as being sources of planning advice. She said, "Mostly, I make up my own mind." This latter seems in consonance with the determination noticed by the interviewer.

Dale may well achieve her academic goals on the basis of standardized test results included in her record. A Lorge-Thorndike IQ of 140 was recorded in 1963; an Otis QS (Beta) of 121 in 1964; DAT scores in the 90th percentiles in 1965; an Otis QS (Gamma) of 128 in 1966; and CEEB scores, verbal 569 and math 679 in 1968.

As mentioned earlier, Dale has a record of excellent grades and achievement. She showed a slight improvement from year nine to year ten. Table I contains specific grades.

Dale said she does not now consider honor roll important to her. "Phasing makes it easier for lower phase students to make it." She said at another time, "I don't feel it's effective with phasing. All phases can make it. Good marks are important, not honor roll."

Dale said she had no "absolutely favorite" subject, but she likes U.S. History least because it "just doesn't interest me." She added this statement would apply to any history course, "It's over, done with, I can't get up for it now."

Dale conducted independent research on Elizabethan literature for English. It was a special class project. She said, "It was just a lot of reading." She asserted much of her history and chemistry work should be classed as independent study, as the teachers assign broad areas for study and then let the students find their own material to fill in their required knowledge. She said there is not much reporting involved but the study must be done or "you can't participate in discussions."

Dale said of homework, "I don't like it but it's necessary to class participation." She varies her ratings of homework, from term to term, between "valuable most of the time" and "always valuable."

Dale

She rates her teachers as generally having "some purpose most of the time" to having "purpose all of the time" in their teaching methods. She rates them all "good" as to process, and "good" as to outcome.

Dale chose all phase IV levels for five majors this year, and has done the same, except mathematics, for the coming year. She attributes assistance in choice-making to her counselor, teachers, and parents. Factors involved in her choices were previous marks, standardized test results, and general interests. She said she preferred phase IV for its "independence of study." Asked about the possibility of phase V, she said she thought that involved just a little more responsibility than she cared to assume. She feels that phase IV, while independent to a great extent, is also supportive, whereas at the five level, the burden is almost totally on the student.

Dale is involved in Tri-S, a girls' service club at school, which takes a responsibility for putting on dances, cake sales, etc. She said "It has purely social objectives." She named no other organized outside activities. She listed four girls as being her closest friends; they are all phase IV students. She also named her boyfriend, who is a 1967 graduate of Amherst and is currently attending the University of Massachusetts.

Dale's record is replete with commendatory remarks. Her third teacher referred to her as "doing excellent work." To her fourth year teacher she was "a good student." Her fifth year teacher said "She is doing very well in all areas." There were two remarks of her sixth year teacher worthy of note: "Dale has done very well not only on her regular work but on special projects and helping others," and "...excellent academic achievements and good contributions to school activities." Amherst teachers and administrators knew her as quiet, but a good student.

Dale would appear to be a somewhat reserved, intelligent, and determined girl. Her record impressed the interviewer, as it has those in the Amherst system, as a very good one. It seems probable that she will achieve her goals of completing high school successfully and entering the University of Massachusetts. It is estimated that vocational direction will come as a product of further education and maturity; Dale apparently has sufficient potential to make it in any one of a number of fields. She has used the Amherst system to advantage and will probably continue such usage. Perhaps she could achieve successfully at a higher level, but Dale cannot see any need for the added responsibility such a level would require.

TABLE I

DALE

Term	Course														
	English IV			U.S. Hist. IV			Alg. II IV			Chem. IV			French III/IV		
	*G	C	E												
1st	A			C			B			B			A		
2nd	A			B			B			B					
3rd	A			B			A			B			A		
Final	A			B			B			B			A		

* G: grade
C: conduct
E: effort

TABLE II

Methods of instruction in order of frequency

English IV	U.S. Hist. IV	Algebra II IV	Chem. IV	French III IV
Discussion Lecture Experience Projects	Discussion Lecture Experience Projects	Problem Solving Question & Answer Lecture	Lecture Problem Solving Question & Answer	Discussion Lecture Question & Answer
		General Comments		
Good	Good	Good	Good	Good

TABLE III

DALE

Test Name	Date	SS	%ile	Norms
Otis QS Beta	9/64	121 IQ		
Otis QS Gamma	9/66	128 IQ		
Lorge Thorndike	1963	140 IQ		
Iowa Basic	9/64			
V		102		
R		107		
L 1		71		
L 2		97		
L 3		95		
L 4		99		
L		92		
W 1		95		
W 2		92		
W 3		92		
W		94		
A 1		89		
A 2		79		
A		84		
C			97 %ile	
DAT	9/65			
VR		37	95 %ile	
NA		18	50 %ile	
VR & NA		55	90 %ile	
AR		43	97 %ile	
MR		52	99 %ile	
SR		59	99 %ile	
Spell		69	65 %ile	
Gram		40	90 %ile	
CEEB	5/68	V 569 M 679		

Class of 1970, Phase IV DICK
10th year

Dick is a good-looking boy, suffering from a mild acne. Striking about him is an air of apology. He behaves as though he had just committed a faux pas, or expects to. He participated pleasantly enough and responded to the questions intelligently. There was difficulty in scheduling the first, and all interviews, as Dick said he was working diligently for good grades. There is quite a bit of family pressure for him to get good grades -- he says there is no sympathy for him at home if he doesn't get A's and B's.

Dick is in his tenth year of school. He is following a pre-college course entirely at the phase IV level. He has maintained A's and B's throughout his entire school career, and is trying to maintain that record. He is a member of the football team, too, which requires much of his first and second term time.

Dick is the youngest of three siblings. An older brother is in his second year of a master of arts program and his older sister is a sophomore at a junior college and plans to transfer to a four-year school. Dick's father is a doctor of philosophy and is a professor at Amherst College and his mother is a doctoral student and a teaching assistant at University of Massachusetts. The academic background of the family has placed a great deal of pressure on Dick. The home library is an excellent one, containing adequate reference works and a large liberal arts content.

Dick

The home environment definitely facilitates learning.

Dick is apparently in good health and has a record of only the usual childhood diseases. He has a stocky build and seems to have outgrown the ungainliness sometimes associated with adolescence.

During the first and all succeeding interviews Dick seemed quite diffident. Discussions about his grades and accomplishments elicited apologetic remarks for his not doing better, and further statements that his family was not quite pleased with his grades and expected better ones of him. A's and B's at phase IV level did not seem to represent underachievement, but both Dick and his parents apparently demanded more. He thought he should be doing better, and that he was applying himself to extra study toward the goal of higher grades. A fourth year teacher's comment seems pertinent, "Tries to be exactly like his friends in that he tries not to be more intelligent." The interviewer suspects a need for counseling, but doubts its availability because Dick's grades preclude academic review, and his school citizenship does not warrant remedy.

Dick's mind is apparently quite firm in his plans for the future. He stated an intention to complete the pre-college curriculum in high school; attend Brown University; follow up with graduate school; and teach German to grades nine and ten. The college and graduate education follow the family pattern. Teaching German would also appear to be following in his parental footsteps.

There is a repetitiveness to Dick's high school curriculum. In year nine he studied English, U.S. History, unified science, algebra and German. His tenth year curriculum included English, ancient history, biology, geometry, and German. His course selections for next year include English, modern European history, chemistry, and German. His stated reasons for dropping the math course was that it gave him too much difficulty--he had to work too hard to get a high grade.

Dick, despite his air of diffidence, would appear to have reasonably full confidence that he will achieve his goals. Probing revealed he is aware he is a bit better intellectually than many of his peers; he is aware of his achievement; and his family is pushing him. It seemed to the interviewer that his confidence was not a particularly happy attitude.

Dick credits his parents, counselor, and teachers with helping him plan his curriculum; his parents with being the major influence on his vocational goals. He designated previous marks, standardized test results, and school requirements for graduation as being the factors influencing both his course choices and his phase choices. He gave the interviewer the impression that he is more directed than self-directing.

In 1964, Dick scored a 128 on the Otis Quick Scoring (Beta) and in the 98th percentile on the Iowa Test of Basic Skills. In 1965, he scored surprisingly low on the Differential Aptitude Test. In 1966, he scored an IQ of 125 on the Otis QS (Gamma). Test scores available appear to confirm the probability of high school success and for college admission.

Elementary grades were predominantly A's; junior high school grades were mixed A's and B's. In year nine he earned four B's and an A at year's end; this year Dick has leveled off with five B's.

Dick

Dick missed the honor roll during the first term because of a C in English. He overcame the deficiency during the second term and regained the honor roll. Dick does not consider the honor roll too significant, under the phase system. He said, "It keeps one working; it's a goal." He also said that he'd like to achieve National Honor Society membership in order to assure entering the college of his choice. It is interesting to note that, during both first and second terms, Dick and his parents thought he could do better. Dick said that his parents feel he can and should get A's.

Dick said he liked German best, although he could not say why. He is doing largely independent study in this course, working with a senior student only. They are principally reading in German; Dick said he liked this arrangement very much. The subject he liked least is geometry. He labelled it too dull. Under questioning, he indicated the dullness was shared by subject and teacher. Standardized test scores in the arithmetic areas are Dick's lowest; his scores are stronger in the verbal and linguistic areas. He said he intends taking no more math courses in high school and that he has taken only what is required for college entrance.

As stated earlier, Dick's German studies are largely independent. He mentioned the possibility of up-phasing to five level in German because he was doing mostly five level work. By up-phasing he hoped to increase his quality points, as he believed he could maintain his grade at the top level. His only reported independent study project was a research report on Caesar, which was a special class project for English. Dick estimated the project was assigned by the teacher for its background value, prior to reading Julius Caesar. He thought it was a valuable learning experience.

Dick stated his homework consisted of reading assignments and study questions, except for geometry which included some problems. He rated all homework as being "valuable most of the time," except history which he rated as having "some value some of the time." He earned one of two A's this year in history. About history, he said, "I don't like the course or the teacher." The history teacher, who Dick says is new this year, rated Dick more as average in both conduct and effort. Dick said this is because the teacher is new and considers "average" to be a good rating. Apparently Dick resented what he considered to be a downgrading. He said geometry was his least preferred subject.

Dick rates all instruction methods as having "purpose all of the time," except history, which he rates as having "some purpose most of the time." His reaction to all courses as to outcome is "OK."

Dick's extracurricular activities have been limited largely to sports. He was a football squad member during both his ninth and tenth years. In the current year he has been a member of the Leader's Club, and the Sports Club. During the summer between the two years he participated in an experimental history course at UMass School of Education; played basketball; and practiced drumming. He lists five close friends, all males; three are phase III and two are phase IV students. Asked about girl friends, he blushed and became moderately embarrassed.

Comments to the interviewer by current teachers indicate that Dick is held in relatively high esteem for his academic performance. His record has few notations; however, a third year teacher wrote that he was "an excellent student." His fourth year teacher called him "a good student" in addition to her remark concerning his trying to be like his friends.

He apparently varies his activities between intellectual and athletic pursuits. He was a willing and perceptive participant in the evaluation study, offering pertinent information other than simple responses to the questions. He indicated that he is under relatively strong parental pressures to excel in academic performance. It is estimated that the Amherst system will enable him to fulfill his capacities.

DICK

TABLE I

Term	Course														
	English IV			Anc. Hist. IV			Geom. IV			Biol. IV			German IV		
	*G	C	E												
1st	C			A			B			A			B		
2nd	B			B			B			B			B		
3rd	A			B			C			B			B		
Final	A			B			B			B			C		

* G: grade
C: conduct
E: effort

- -

TABLE II

Methods of instruction in order of frequency

English IV	Anc. Hist. IV	Biology IV	Geometry IV	German IV
Discussion Question & Answer Experience Projects	Discussion Lecture Question & Answer	Lecture Question & Answer Problem Solving	Lecture Problem Solving Group Research	Audio Visual Read & Recite Question & Answer
		General Comments		
O.K.	O.K.	O.K.	O.K.	O.K.

TABLE III

DICK

Test Name	Date	SS	%ile	Norms
Otis QS Beta	9/64	128 IQ		
Otis QS Gamma		125		
Iowa Basic	9/64			
V		111		
R		119		
Li		95		
L2		90		
L3		79		
L4		99		
L		91		
W 1		90		
W 2		86		
W 3		84		
W		87		
A 1		84		
A 2		79		
A		82		
Comp			98 %ile	
DAT	9/65			
VR		29	85 %ile	
NA		18	55 %ile	
VR & NA		47	75 %ile	
AR		28	50 %ile	
Cl Sp & Acc		39	65 %ile	
MR		42	50 %ile	
SR		21	45 %ile	
Spell		88	97 %ile	
Gram		34	90 %ile	

Class of 1970, Phase IV
10th year

PATSY

Refreshingly natural, might be an appropriate description of the impression one receives while talking to Patsy, for she is bright, friendly and unaffected. She looks rather like a painting by Rockwell of the all-American girl. Her clothing is in simple, good taste. She wears her hair straight, at shoulder length, and she has a sprinkling of freckles across her nose.

Patsy, a sophomore, is in French phase IV, geometry phase IV, history phase IV, biology phase III and English phase V. Patsy is also in chorus, band and orchestra.

Patsy's father is a professor at the University. Her mother, who has a master's degree, works in Amherst with children who have learning difficulties. Patsy has two younger sisters, age eight, who are twins. She alternates between adoring the twins and feeling somewhat put out by them when she has responsibility for their care. Patsy's family has been located in Amherst for a number of years and Patsy has been in the Amherst school system since grade one.

Patsy appears to be in good physical condition and aside from the usual childhood illnesses and occasional colds, she has never had any health problems.

Patsy is a friendly, outgoing girl, who makes and keeps friends easily. She is involved in a number of activities and seems to have almost boundless energy. Patsy has a well developed sense of humor with a slightly sarcastic edge to it. She is interested in and well informed on current events. She seems to be deeply concerned with social injustice and political issues.

Patsy's courses are oriented toward a college career. She enjoys school and is looking forward to college. Presently Patsy's plans do not go beyond entering college. She is not sure what she will major in, but indicated that she is generally interested in the humanities. She seems to be confident that she will be able to get into college and do the work required of her there.

Patsy considers herself to be able to make her own decisions and does not feel that she needs a great deal of advice in academic or vocational matters. She has, however, found her parents, guidance counselor and friends all helpful sources of information.

Patsy's test scores indicate that her confidence is well founded. It appears that her academic ability is well above the average and that she could be successful in whatever area she chooses.

Patsy has always been a successful student. Her marks have consistently been high through her school years. This year she had a straight A final average.

Patsy has been consistently on the honor roll since she entered high school, yet she does not consider the honor roll important. She seems to feel that marks are a by-product of learning, and she is more concerned about learning than in marks. However, she is proud of the marks she has earned. Patsy does think that the honor roll has some merit in that it gives the lower phase students some recognition for their achievement.

The subject Patsy likes best is English. Not only does she find the subject itself interesting, she feels that she has an exceptionally good teacher. This is Patsy's only phase V class.

Patsy had some trouble deciding which was her least liked course. It was somewhat of a toss-up between French and biology. In both cases Patsy objected to the teacher rather than to the subject matter.

Patsy's marks have been so consistent that if there were a fluctuation in her marks sometime in the future, there would probably be just cause for concern.

Patsy's geometry class is conducted on an independent basis. The students are given a certain amount of material to cover and when each one of the students feels he is prepared he is tested. The teacher is available for consultation any time students are having difficulty. Patsy prefers this arrangement to having regular classes.

Patsy has not initiated any independent study projects, primarily for lack of time. She feels that if she had more time, perhaps, she would be doing more work of this nature.

Patsy feels that the grading system is generally fair. She is, however, concerned about her marks in biology. Patsy feels that an A usually reflects the fact that a student has put a good deal of time and effort into a subject. She seems to feel almost guilty about having gotten A's in biology, while other students, who have worked harder, have not earned A's, because she has put very little effort into this subject.

Most of Patsy's homework involves reading or writing essays. Patsy feels that homework is valuable because there is not time in the classroom to cover all the material that she would like to study. Patsy does question the value of her biology homework, which is primarily reading from the text book because she feels that the text simply repeats what is covered in class and adds nothing new.

Patsy feels that she could do phase IV or V work in biology, but she decided that she would take phase III because she has five other, more interesting academic courses and many outside activities. She wanted one course that she did not have to put a great deal of time into. Although she does not like the homework in biology, she feels that homework which is repetitious to her might be necessary for those students having difficulty "getting things the first time around."

The two classes Patsy thought were purposeful all of the time were English and history. The common teaching method in both classes is discussion. In biology, the only class Patsy felt served no purpose, lecture was the major teaching method.

Patsy has made her own decisions about phase placement. Her parents have left her a free hand here, because as Patsy indicated, they trust her judgement. Patsy could probably do well if she were in higher phases, but if she were in all phase V classes she would have to devote too much time to school work and there are other things Patsy considers important.

Patsy

In many schools, band, glee club, and orchestra are considered extracurricular activities, but at Amherst these activities are given graduation credits and students are graded. Patsy enjoys these activities and has received straight A grades in her music classes.

Patsy also enjoys acting and is a member of the school's theatrical group. During the summer she will be in the leading role of Guys and Dolls to be given at the high school by a group of local actors.

Patsy also enjoys getting together with her friends for informal gatherings. Her best friends are in somewhat lower phases than Patsy is.

Patsy has never had any disciplinary or academic problems. She seems to respect school authority. Although she does not always agree with school policy, she would not be likely to defy rules.

The ungraded system in Amherst appears to be giving Patsy the opportunity to fully explore her interest and develop her talents. Because she is able to take a phase III biology class, Patsy has more time to devote to a phase V English class. Because of the freedom to choose her individual levels of difficulty she is using her academic ability well and she is satisfying her interests in other areas.

Certainly Patsy seems to be taking full advantage of the ungraded system. She enjoys school; teachers enjoy having her in their classes; she is involved in activities outside of school; she is a "bright," "inquisitive," "eager to learn" -- (to quote her teachers) -- student.

PATSY

TABLE I

Term	Course														
	English V			Hist. IV			French IV			Biology III			Geometry IV		
	*G	C	E												
1st	A	1	1	A	1	1	A	1	1	A	1	1	A	1	1
2nd	A	1	1	A	1	1	A	1	1	A	1	1	A	1	1
3rd	A	1	1	A	1	1	A	1	1	A	1	1	A	1	1
	A	1	1	A	1	1	A	1	1	A	1	1	A	1	1
Final	A			A			A			A			A		

* G: grade
C: conduct
E: effort

TABLE II

Methods of instruction in order of frequency

English V	History IV	French IV	Math	Biology III
Discussion Group Research	Discussion	Discussion Question & Answer	Group Research Independent Problem Solving	Lecture
		General Comments		
Purpose all of the time.	Likes discussion but wishes that there was more variety in methods.	Purpose most of the time.	Enjoys working independently and with other students outside of class.	No purpose.

TABLE III

Test Name	Date	SS	%ile	Norms
WISC	3/65	verb 129 perf 124		
Otis Beta	1966	137		
Otis Gamma	1966	131		
DAT verbal	1965		99 %ile	
num			99 %ile	
abst reason			99 %ile	
cler			44 %ile	
mech			97 %ile	
sp rel			80 %ile	
spel			99 %ile	
gram			99 %ile	
Supplementary Achievement Test CEEB	2/68	747		
Metropolitan Achievement			Stanines	
word know			9	
read			9	
spel			9	
lang			9	
lang skill			9	
arith comp			8	
arith prob			8	
soc st info			9	
soc st skills			9	
science			9	

Class of 1969, Phase II JAN
11th year

Upon first meeting Jan, one might well be so struck with her size that her other features will be ignored. Jan is five feet three inches, 250 pounds. She moves slowly and deliberately and seems to think and talk in the same manner. She seems to be an easy-going person. Although she is somewhat shy, she is not easily ruffled. She has a slow easy smile that seems to take some time to develop. Her laugh is a soft chuckle. Jan's clothes are somewhat out of fashion, and fit poorly. It appears that very little money is directed toward her wardrobe.

Jan is a junior, primarily in phase II classes and her courses are general in nature. She is not interested in the business curriculum and does not feel that she could compete with students in higher phases. This year Jan's courses included English, phase II; art, phase III; unified science, phase II; modern problems, phase II; and home economics, X phase.

Neither of Jan's parents finished high school. Although she has one older sister who did not finish high school, Jan hopes to graduate next year.

There is no record of a glandular problem to account for Jan's overweight condition. Except for her weight Jan is in good health. She had all the usual childhood diseases and immunizations. Her hearing and sight seem to be normal.

12

Jan

When Jan was a baby she had meningitis. There is no record of any permanent damage. During elementary school her mother often kept her home when weather was bad or she showed signs of fatigue.

Jan is not a very outgoing person. Although she is very pleasant and friendly, she does not seem to take the initiative in social situations. She is rather quiet, but seems to enjoy talking when people display interest in what she has to say.

Jan has no definite life plans. She wants to graduate from high school because she feels that she will be able to get a better job if she has a diploma. At the same time she is aware of the fact that she will not have any particular vocational skills when she finishes high school and she is not sure what kind of job she will be able to get.

Next year, Jan will be taking a course in child care, to be given for the first time. Jan is not so sure that she likes children enough to plan on earning a living caring for them, but she thinks that it might be a good idea to "try this course and see how things work out."

Jan feels that the main reason for taking any subject is to fulfill graduation requirements. Her counselor has been helpful in advising which courses she needs for graduation. Apparently she has received little advice from any other source.

Jan has tended to score slightly below the mean on standardized tests. On the DAT her scores were generally below average. Her decision not to enter a clerical position upon graduation seems to be a wise one. Her DAT scores on the verbal, numerical ability, clerical, spelling and grammar indicate that she might be at a disadvantage in a clerical position.

Jan's test scores indicate that she lies within the normal range of mental ability and should be capable of doing the school work necessary in order to graduate from high school.

Jan's marks have generally been average. Although she has received a smattering of B's and D's, most of her marks have been C's. This year Jan was rather pleased with herself because most of her marks were generally above average.

Jan has never made the honor roll and stated that she did not think that the honor roll was very important. However, the pride Jan takes in the high marks she received this year seems to indicate that if she did make the honor roll she would be pleased.

Jan almost made the honor roll during the third marking period. She had A's and B's in all of her academic subjects. However, a D in physical education with a three in effort prevented her qualification.

Jan likes art more than any of her other subjects. This is one of the courses she took simply because she wanted to, not because of school requirements. There was only one boy in Jan's art class, a fact which Jan made very clear. She apparently feels uncomfortable with boys. She plans to take art again next year.

In Jan's mind, English and gym run a close tie on being her least liked subject. She said that she did not like gym because it was too hard. The main reason she gave for disliking English is that this is the second year in succession with the same teacher.

Jan indicated that her teachers generally marked fairly. She did, however, express the opinion that her home economics teacher had very little information on which to base marks. Jan felt that her class performance had been equal to those who had received higher marks.

Jan rarely had any homework this year, except when studying for tests. The only class in which there seemed to have been assigned homework was English. In this subject she spent fifteen to thirty minutes on school nights reading the textbook. She feels that her English homework is usually of some value.

Jan did not express any enthusiasm for particular teaching methods. She did feel that she learned a great deal in science and that this class was almost always meaningful. According to Jan the teaching methods most often used in her science class were first, problem solving; second, lecture; and third, discussion.

Jan is not sure whether her phase placement was her choice or her counselor's. At any rate, she appears to be satisfied and her marks indicate the choice was compatible with her achievement. According to scores she received on some standardized tests, Jan may well be able to do phase III work in more of her subjects; however, because she might have difficulty earning A's and B's if she up phased, it is questionable whether she would benefit from such a move.

Jan's two closest friends are at the same phase level in English and the same socio-economic level as she. None of them are involved in extracurricular activities at school. They go to the girls' club one or two nights a week to talk and play games. Jan indicated that she enjoys this activity very much but is afraid that she and her two friends will have to stop going to the club because they are much older than most of the girls who go there.

Jan has never had detention or any disciplinary problems at school.

The ungraded system in Amherst has given Jan an opportunity to taste success in school. Jan seems to enjoy her school experience and does not exhibit any feelings of inferiority about being in phase two classes.

Jan seems to thrive on individual attention and would probably benefit from a great deal more than she is now receiving. Jan will need help in finding satisfying work when she finishes school. She will have few marketable skills and her weight problem seems to preclude any job which would be physically strenuous.

Although Jan may be somewhat immature in her interests (i.e., girls' club activities, lack of interest in boys, lack of interest in her appearance) she appears to be an emotionally stable, pleasant person. If the school continues to provide Jan with rewarding experiences and helps her in making a vocational decision, she will probably be able to adjust with little difficulty to the world of work.

JAN

TABLE I

Term	Course														
	English II			Mod.Prob II			Uni Sci II			Art III			Home Ec		
	*G	C	E												
1st	B+	1	1	C+	1	1	B+	1	1	B+	1	1	B	1	1
2nd	B -	1	1	B	1	1	B+	1	1	A	1	1	C-	1	1
3rd	B	1	1	B	1	1	A	1	1	A-	1	1	B	1	1
	C	1	1	B	1	1	A	1	1	A	1	1	C	1	1
Final															

* G: grade
C: conduct
E: effort

TABLE II

Methods of instruction in order of frequency

English ph II	Mod. Prob ph II	Unif Science II	Art ph III	Home Ec
Read & Recite Discussion Question & Answer	Lecture Discussion Experience Projects	Problem Solving Lecture Discussion	Audio Visual Demonstration Experience Projects	Lecture Discussion Audio Visual
General Comments				
"Some purpose most of the time."	"Some purpose most of the time."	"Purpose all of the time."	"Some purpose most of the time."	"Some purpose most of the time."

JAN

TABLE III

Test Name	Date	SS	%ile	Norms
Binet	1958	92		
Lorge Thorndike	1963	104		
Otis	1963	92		
DAT verbal	1965		15 %ile	Nat'l
num			5 %ile	"
abst. reas			40 %ile	"
clerical			20 %ile	"
mech			35 %ile	"
space rel			20 %ile	"
spelling			20 %ile	"
grammar			20 %ile	"
Iowa Basic	1962 grade 6		grade equ. V 4.8 R 6.3 L 5.6 W 5.8 A 6.7 Comp 5.8	

Class of 1969, Phase III
11th year

PETER

There is an artlessness about Peter that is difficult to describe. Peter seems to operate on the basic assumption that people are likeable until proven otherwise. He seems to possess a healthy self-respect with no aura of conceit or snobbishness about him.

Peter, a junior, is in English, phase II. His other subjects are all phase III. They include chemistry, algebra, Latin I and mechanical drawing.

Peter's father, a college graduate, is a civil engineer. He is employed by the department of public works in one of the neighboring towns. Peter's mother, who is also a college graduate, is not presently employed outside the home. Peter has one older sister, who is one year ahead of him in school. There are no other children in the family.

Peter is five feet ten inches tall and weighs 160 pounds. He appears to be in excellent physical condition. His health records indicate that aside from the usual childhood diseases he has not suffered from any serious disorders.

Peter seems to be rather easygoing and does not enjoy highly competitive situations. The fact that he is not very competitive may explain why Peter, a boy with an athletic build and a love of physical activity, is not involved with school sports. He is friendly and optimistic about life. He has a tendency to underestimate his potential ability.

Peter

Peter's courses during high school have been geared toward college preparatory subjects. They have included social studies, foreign language, math, and science.

He is unsure of his plans for the future. His interests are varied and he said that he sees himself a "kind of jack of all trades and master of none." It seems that Peter is not only unsure of what he wants to do, he is also unsure of what he does best. He would like to continue his education beyond high school, but he does not know whether he will go to college or attend a technical school. Despite some difficulty, especially with foreign languages, Peter has persisted in a program of studies that is academic in nature.

Peter said that he had sought little advice from anyone. He seemed sure that his plans were realistic and he appeared pleased about being able to take credit for his own planning. His parents are interested in his school work but they do not push him and they respect his decisions.

Peter's performance on standardized tests depends upon which tests and subtests one looks at.

In elementary school, Peter's parents felt that he was not performing up to his ability. He was given the WISC in 1962. His verbal score was 109, performance 122 and a full scale IQ of 117. Earlier intelligence tests placed him closer to the mean. He scored 106 on the Binet in 1957 and 109 on the SRA in 1960. Later aptitude and achievement tests show some of the same inconsistencies. If given the opportunity to continue his education beyond high school, he may be sufficiently motivated to use the ability that he has shown by test scores.

Peter has been working at primarily a phase III level. His marks have been generally B's and C's. He has received an occasional D or F.

Peter has not been on the honor roll and he stated that he does not not feel that the honor roll is very important. He said that he does not think that one person is better than another because he makes the honor roll and he does not understand what all the fuss is about. It seems doubtful that he would object to having his name included on the list, however, since he is quite pleased when he receives A's and B's.

Peter could not decide between English or math as his favorite subject. He said that he likes English because the subject matter is interesting and that he likes math because it's easy and he does not have to work very hard for a good grade. There was no subject that he liked least. He said that he enjoyed all of his courses and liked his teachers.

Peter's most significant grade fluctuations have been in foreign languages. He went from a B - in Latin first term to an F his last term. Peter never spoke of his difficulty with Latin and actually reported inflated grades to the interviewer. When in fact his marks were B -, B -, C, he reported A's and A-. According to his records, Peter has always had some verbal difficulty. His standardized test performance, his marks in reading, English and French indicate that he might have some difficulty with Latin, yet there is no obvious reason for Peter's grade fluctuation in this subject during the past year.

Peter has not done any formal independent study, but he occasionally writes short stories that he turns into his English teacher for criticism and suggestions for improvement. He has sent several stories to Reader's Digest and hopes one day to have something published.

Peter said that he thought the grading system was fair, yet he reported to the interviewer higher marks than he actually received. It appears that he is not entirely content with his marks, but it is not possible to state whether he is disappointed in himself or feels that he deserves the higher marks that he reported.

Peter felt that most of his homework this year has been valuable most of the time. The only homework he rated as having no value was algebra. He said that the subject was very easy for him and that he could get high grades without doing the homework. Algebra was Peter's best subject this year with B+ first term and A's the other three terms. His other homework included problem solving in chemistry, translations in Latin, and reading in English.

Peter had some difficulty distinguishing between his preference for particular teachers and his preference for particular teaching methods. There is little commonality in the methods used in the three classes Peter stated were purposeful all of the time. There is also little commonality in the methods used by the teachers in two classes Peter said had some purpose most of the time. The really common element in the three classes where methods used by the teacher were rated by Peter as being purposeful all of the time is the fact that he likes the teachers in these three classes better than the teachers of his other two classes.

Peter said that he had decided upon his phase placement without much advice from anyone. He said that he had made his decisions on the basis of past marks. Peter said that his parents agreed with his decisions concerning phase placement. He also said that as far as he knew his guidance counselor did not have any objections.

He is not involved in any formal school or community activities. He said that he likes to go to sports events and sometimes to dances and parties.

Peter started a bird watching club that now has thirteen members. Peter told the interviewer about the club with some hesitation, almost as if he were telling a secret. He did not seem to want anyone else to know about it. Apparently the group has been the butt of many jokes around school. According to Peter the club is quite active, holding meetings almost every week and having outings at least once a month.

Peter's closest friends, all of whom are involved with the bird watching club, are in higher phases in school than Peter is. Most of his friends come from families that are of slightly lower socio-economic status than his.

Peter has not had any disciplinary problem in school. With his amiable nature it is difficult to imagine him doing anything that would attract unfavorable attention.

Peter

Peter failed Latin and he has not signed up to take it over again next year. Apparently Peter has given up as far as foreign languages are concerned.

There are no recent teachers' comments available on Peter's records. Elementary school teachers found his lack of motivation exasperating. They seemed to agree that he was a capable child but that he just was not working.

Peter did quite well in both English and math this year, yet he is not up phasing next year in these subjects. He also did well in mechanical drawing but is not continuing with this course next year. Peter did only average work in chemistry this year yet he is planning to take physics next year.

Peter has increased his motivation for achievement since his earlier years in school. By being allowed to set his own pace he has discovered that he likes school. However, Peter needs more information and counseling concerning his plans for the future. His present course of studies could be strengthened to improve his chances for continuing his education after high school.

PETER

TABLE I

Term	Course English III *G	 C	 E	 Chem III			 Alg. III			 Latin III			 Mech Draw		
1st	B	1	1	C	2	1	B+	1	1	B-	1	1	C	1	1
2nd	B	1	1	C	1	1	A	1	1	B-	1	1	B	1	1
3rd	B-	1	1	C-	1	1	A	1	1	C-	2	1	B	1	1
Final	B+	1	1	B	1	1	A-	1	1	F	3	1	B	1	1

* G: grade
C: conduct
E: effort

TABLE II

Methods of instruction in order of frequency

English ph III	Alg II ph III	Latin I ph III	Chem ph III	Mech Dr.III
Question & Answer Discussion Group Research	Problem Solving Demonstration	Read & Recite Question & Answer	Lecture Experience Projects	Experience Projects Problem Solving
General Comments				
Likes this class. Purpose all of the time.	Purpose all of the time.	Purpose all of the time.	Some purpose most of the time.	Some purpose most of the time.

TABLE III

PETER

Test Name	Date	SS	%ile	Norms
Binet	1957	106		
SRA	1960	109		
WISC	1962	verbal 109 perf 122 full scale 117		
Otis Beta	1963	115		
Otis Gamma	1967	106		
DAT verbal	1964		50 %ile	Nat'l
num			60 %ile	
U & N			55 %ile	
abst res			35 %ile	
cl			95 %ile	
mech			25 %ile	
sp rel			5 %ile	
spel			5 %ile	
grm			45 %ile	
PSAT	1967		verb 63%ile	
			math 38%ile	"
Iowa	10/61 grade 5 10/62 - grade 6		grade equiv '61 '62	
		V	4.9 6.2	
		C	4.4 5.6	
		L	4.7 5.1	
		W	5.1 7.1	
		A	4.8 5.8	
		Composite	4.9 6.0	

Class of 1969, Phase III
11th year

TED

Ted is an amiable boy who is anxious to please and seems to enjoy talking to anyone who is interested in listening to him. He tends to be a bit nervous with strangers but once he is at ease, he is quite a chatterer.

Ted, a junior, is taking all phase III courses. The include English, history, algebra, German, chemistry, and cabinet making.

Ted's parents have been separated for a number of years. It has been ten years since he has seen his father. He knows that his father did graduate from high school, but Ted has no idea what his father's present occupation is. Ted's mother, who is also a high school graduate, is a food service worker at the University. Ted has one older sister, a student at Amherst High School.

Until this year Ted tended to be smaller, and more frail than his peers. It appears that he is catching up. Ted added three inches and ten pounds to his stature during the school year. He is now 5'8", 140 pounds.

Although Ted is rather shy when meeting new people, he seems to be an easygoing boy, who does not worry about the future. He might be considered somewhat socially immature since he has not dated yet and is interested in activities which do not include the opposite sex.

Most of Ted's courses have been geared toward college preparatory work. He has taken cabinet making for the last three years as his "ace in the hole" in case he does not get into college.

Ted

Ted is vague about his plans for the future. He does not seem to have any idea what he wants to do when he finishes high school. He feels that he ought to go to college, but has no idea what he will major in when he gets there.

Ted has had some difficulty with a few of his courses, particularly those in the areas of foreign language, math and science. Despite his academic difficulty, Ted has pursued a course of studies which included these subjects.

Ted has received most of his advice from his older sister and from friends. He has not felt the need to seek advice from his guidance counselor.

Although Ted's scores on standardized tests are not outstanding, they are above average. He would probably be able to do the work in a college that was not highly competitive.

Ted has been generally an average student. His courses in high school have been phase III and his marks have been in the C and B range. He has never made the honor roll. There have usually been one or two courses each marking term that have given him trouble and made him ineligible. Ted's attitude toward making the honor roll is well summed up in his following statement: "Great if you make it, but it's not the end of the world if you don't."

Ted likes history, English and cabinet making equally well. The reason he likes these courses is that he does not get as bored as he does in some other classes. He indicated that gym was his all-time favorite class, and he wished that he could take more gym classes and fewer academic ones.

Ted finds foreign languages a bore. This year he is taking German and says "there is just nothing interesting about it!"

Ted has consistently done better in English and social studies classes than he has in math, science and foreign languages. It seems that Ted finds it difficult to apply himself to the studying of subjects he feels are boring.

Most of Ted's homework consists of reading from the text book. In algebra, homework is exclusively problem solving, which Ted feels is essential to understanding the subject. Ted has his doubts about the value of homework in his other courses, however. He feels that the reading in English might be of greater value if there were more classroom discussion of the material read.

Ted is not a scholar. He feels that in school you do what you have to do: "I can't imagine why anyone would do independent study unless a teacher said you had to or unless you needed to 'get in good' with him." Since neither of the two circumstances have occurred in Ted's high school career, he has not done any independent study.

Ted feels that the grading system at school is fair. He does, however, wonder about the effort marks he has received in chemistry, German and algebra. Ted has consistently received one in effort, when by his own admission he has put little work into these subjects. Ted feels that ones in effort are not consistent with D's and F's in achievement.

Ted

In cabinet making, students are allowed to plan and work on individual projects. The teacher is available for help and advice when necessary. Ted enjoys this class but he does not see how this method of instruction could be carried over into academic classes.

The teaching methods used in Ted's history class are discussion, lecture, and reading. Ted feels that he learns a great deal in this class and rates these methods as being purposeful all of the time. Ted does not feel that the teaching methods in his other academic classes are very meaningful. The missing element in English, German, chemistry and math is discussion. Ted would like more discussion in all of these classes, especially in English.

Ted's scores in mathematical ability on standardized achievement tests have been below the 50th percentile. These scores are consistent with his school performance in this area. However, in comparison to test scores in other areas, Ted appears to be working somewhat below his potential.

Ted considers himself to be an average student and has decided that phase III is consistent with his ability. He is happy working in phase III because he does not have to extend himself in order to pass English or history. He feels that chemistry, math or German at a phase IV level would be impossible. He says "they are boring enough when I know what's going on, it would be awful in phase IV, where I probably wouldn't know what the teacher was talking about."

Ted

Ted indicated that his mother is interested in his school work but that she does not understand the phasing system very well. She is content to let Ted make his own decision concerning not only his phases but his total school program.

Ted is not a very self-determined person, and if his guidance counselor or his teachers strongly suggested that he either up or down phase, Ted would probably agree. Because he has been working at the phase III level in past years and will again next year it appears the the school permits him this decision.

Ted's three closest friends are all in primarily phase III courses. None of them are involved, to any great extent, in organized extracurricular activities. Ted said that he and his friends go to the Boys' Club on rare occasions when they cannot think of anything else to do. They also lift weights infrequently, after school in the gym.

Ted is a member of his church's young people's social group. He said that he avoids going to these meetings as often as possible but his mother would like him to be more involved with this group. Ted would like to be completely disassociated from this group. He really enjoys "just hanging around" with his friends.

Ted has not had any disciplinary problems in school. In academic matters, however, things have not been running as smoothly. Ted has had some difficulty, especially with foreign languages. Ted's grades were quite low in German II this year and he will not be able to continue with German III. Ted, with an optimistic attitude, plans to repeat German II next year. He has heard that there are colleges that require only two years of a language and he figures that if he does well next year he still has a chance.

Ted has attracted neither praise nor blame from his teachers. There are no comments recorded in his transcript.

It is difficult to say whether Ted is simply poorly informed or incurably optimistic. Although he has the potential to do better work, his performance in school has not been outstanding.

It appears that Ted has received little counseling or informed advice. Perhaps because he is in the middle phase, generally performing at an average level, he has been overlooked.

He may need more help and attention than he is presently receiving if he is going to succeed as well as he would like in the working world or in higher education.

TED

E-244

TABLE I

Term	Course																
	English III			History III			Algebra III			German III			Chem III			also Cab Making		
	*G	C	E															X
1st	B	1	1	B+	1	1	D	1	1	B	1	1	B	1	1	A	1	1
2nd	B+	1	1	B+	1	1	C+	1	1	D	1	1	D	1	1	A	1	1
3rd	A	1	1	B+	1	1	D	1	1	F	1	1	D	1	1	A	1	1
	B	1	1	B+	1	1	D	1	1	F	1	1	D	1	1	A	1	1
Final	B															A		

* G: grade
C: conduct
E: effort

TABLE II

Methods of instruction in order of frequency

English III	History III	Chem III	Cabinet Making IV	Math III
Question & Answer Read & Recite Discussion	Discussion Lecture Read & Recite	Lecture Experience Projects Question & Answer	Experience Projects	Problem Solving Question & Answer
		General Comments		
Some purpose most of the time. (would like more discussion)	Purpose all of the time.	Some purpose most of the time.	Purpose all of the time.	Some purpose most of the time.

Also German; ph III
method: Drill, read & recite.
comment: Some purpose most of the time.

TABLE III

TED

Test Name	Date	SS	%ile	Norms
Otis	9/63	110		
DAT verbal	1964		35 %ile	Nat'l
num			39 %ile	"
ab reas			65 %ile	"
cler			40 %ile	"
mech			30 %ile	"
sp rel			60 %ile	"
spell			85 %ile	"
gram			80 %ile	"
Metro Achievement	5/63		Stanine	Nat'l
work kn			9	
read			8	
spell			9	
lang			7	
lang skill			5	
arith comp			7	
arith prob			6	
soc st infor			8	
soc st skill			7	
science			9	
Iowa verbal	9/63		94 %ile	
read			92 %ile	
sp			84 %ile	
cap			82 %ile	
punc			64 %ile	
use			30 %ile	
graph			82 %ile	
maps			78 %ile	
ref			81 %ile	
arith comp			89 %ile	
arith prob			42 %ile	
composite			89 %ile	

Class of 1969, Phase IV EARL
11th year

Earl has a polite, pleasant manner and related quite well during all interviews. Despite difficulty in arranging interviews due to several schedule changes he always appeared as scheduled and reappointed a mutually suitable time.

Earl moved into Amherst at the beginning of his tenth year of school. A good student according to his ninth year record, he has improved since coming to Amherst. His ninth year record included three B's and two C's. At Amherst, he has earned nothing but A's and B's. He scored in the 99th percentile on the PSAT in 1967, and scored a 708 Verbal and 659 Mathematics record on the SAT in 1968. He is in a pre-college curriculum and is involved in three non-academic school activities. According to his list of friends, he would appear to associate only with his intellectual peers.

Earl has a younger sister. The home is educationally oriented -- his mother teaches kindergarten and his father is a professor at the University. The family subscribes to top rated newspapers and magazines. Earl has a library membership and uses the library extensively. Moreover, the best of reference books are apparently available in his home.

Earl has had the usual childhood diseases. He has a record of the normal immunizations. Aside from his adolescent acne, he appears to be a healthy young man.

Earl

During all interviews, the general tone of the interviews was one of a conversation between two adults. His mature behavior was evident in the thoughtfulness of his responses and in his own confidence.

Earl plans to complete a pre-college curriculum in line with his goal of college. He has no definite vocational plans at present, and under probing he refused to speculate on them. As a matter of personal interest, he feels he might major in history.

Earl would appear to be fully confident in his ability not only to complete his present course successfully but also to enter college and to earn a bachelor's degree. His parents are the primary influence in Earl's curriculum choice, but teachers and counselor had greater influence on his choice of phases. He also cited his clergyman as a source of curriculum advice. Factors affecting curriculum and phase choice were general interests, school requirements, previous marks, standardized test results, and vocational interests.

Grades since the fifth grade generally consist of A's and B's. Although his ninth year included C's in science and French, he has maintained predominantly B grade level at Amherst.

Earl feels it is important to be on the honor roll since this indicates A and/or B achievement. However, there can be no other reason under the phase system, wherein anyone can achieve the honor roll, except, he added, it keeps parents happy.

For several reasons, Earl's favorite subject is history. He said he likes the teacher; he has a reasonably good background; and he finds outside reading "grossly interesting." With regard to least liked subject, he replied, "It's hard to say because I like them all, but French is the most boring because we do less per period."

Earl's grades do not generally vary from term to term but have shown a general tendency to improve throughout high school. During the second term this year, he dropped to two C's because he had been absent for almost two weeks prior to grade closing dates. As a result, he was unable to get caught up in order to pass a math test, and he failed to complete a chemistry report. His third term grades revealed three A's and two B's.

Earl conducted three independent projects during the first term. They consisted of reports for English, chemistry, and history involving outside reading. Earl tended to deprecate their importance, saying "They're just some outside reading, and I'd do that anyway."

Earl rates all his homework as being "always valuable." Generally it consists of either textbook or outside reading. English requires some writing of essays; algebra, chemistry, and French require some preparation to respond to study questions. He said he does not think homework is excessive, and it is all necessary to effective participation in class.

Following the first term, Earl rated all courses "good" for both process and outcome. By the completion of the third term, he had downgraded algebra and French to "OK" on process; other ratings remained unchanged. He could not elaborate as to why he changed the ratings for the two subjects, said he did not "consider it a serious change, anyway."

Earl

Three IQ measures are reported for Earl, an Otis QS (Beta) in 1964--score 133, same test (Gamma) in 1966--score 137. Again, in 1967 the same test resulted in an IQ score of 135. Other measures available are PSAT score Verbal 64/99th percentile, Math 65/99th percentile. SAT scores were Verbal 708, Math 658.

Earl's phases are all four and he will leave them at that level for next year. He credited his teachers and counselor with helping him to make his phase choices. His parents, he said, also closely monitored his planned schedule. Asked if he could achieve as well at a five level, he indicated that he was happy where he was and did not feel like extending himself.

Earl named as his five closest friends boys who not only are generally at the overall four phase level but also are of the same socio-economic level. Because he is new to Amherst they are friendships made within the last year. He is a member of the Match Wits team, the Graphic staff, and the stage crew for school theatrical productions. His only community affiliate is a church group.

There is one instance of an academic complaint. In May 1967, his history teacher filed a special report with the school guidance office, which castigated Earl for "Lack of work," "Lack of interest and care," and "Failure to turn in book reports and term papers." A guidance follow-up to all other teachers received the following ratings: English, "Doing OK;" French, "Good, serious student;" geometry, "OK, top 5 in class of 35;" and biology, "OK - sits in front, participates." Earl explained that he had turned in a report late, but he thought the teacher got a bit over-wrought about the whole thing. This was one of two ventures into phase V for Earl, and it seemed from his conversations that he had thought he could set his own schedules and found out differently. Only a month after the incident, Earl received his final grade, a B, in the course.

There are no comments in his transfer record to draw on in order to estimate his past teacher-student relationships. Earl is well-thought of as a student at Amherst. Conversations with his counselor revealed that last year's opinions are generally subscribed to by this year's teachers.

Earl appears to be doing well at a phase IV level. That he will successfully complete his pre-college curriculum and be admitted to college seems certain. Earl's current intention would seem to be to get good grades at his chosen level, without extending himself in a higher level.

EARL

TABLE I

Term	Course														
	English V			US Hist. V			Chem IV			Alg. IV			French IV		
	*G	C	E												
1st	B	1	1	A	1	1	A	1	1	A-	1	1	B	1	1
2nd	B	1	1	A	1	1	C	1	1	C	1	2	A	1	1
3rd															
Final	B			A			B			B			A		

* G: grade
C: conduct
E: effort

TABLE II

Methods of instruction in order of frequency

English V	Alg. II/IV	US Hist. V	French IV	Chem IV
Lecture	Lecture	Discussion	Lecture	Lecture
Discussion	Question & Answer	Lecture	Read & Recite	Discussion
	Problem Solving	Experience Projects	Audio Visual	Problem Solving
General Comments				
Good	Good	Good	Good	Good
"HAS VERY GOOD CLASSES THIS YEAR"				

TABLE III

EARL

Test Name	Date	SS	%ile	Norms
Otis QS Beta	11/64	133 IQ		
Otis QS Gamma	9/66	137		
Otis QS Gamma	1/67	135		
SAT (JM)	1/65	Grade Equ.		
Par. Mean		12.9		
Word Mean		12.9		
Spell		10.5		
Lang		11.6		
Arith		12.4		
Arith Comp		11.5		
PSAT	1967	V 64	99 %ile	
		M 65	99 %ile	
CEEB	5/68			
	Eng	27	91	
	Math	25	75	
	Soc Stud	30	96	
	Science	27	91	
	Word	29	94	
SAT	3/68	V 708		
		M 659		

Class of 1969, Phase IV KAREN
11th year

Karen is a well-dressed, neat-looking girl. She took issue with the interviewer about the phasing program exhibiting a deep interest and understanding of the program. She began asking a number of questions herself about the value of the non-graded program. Clearly, Karen is not one to accept ideas without acute inspection.

Karen is on a pre-college course. Her phase IV subjects include English, chemistry, French II and art. Algebra II is her only phase III subject. Her highest achievement course is English in which she earned one A and two B's for the first three terms. Chemistry is her poorest subject in which she received two D's and a C. Her other subjects are C+ or B- work. Karen has received all 1's in both conduct and effort.

Karen's father is a salesman and her mother is a housewife. Both parents are high school graduates and her father received company training. The family is listed in the third socio-economic category. The family is mobile, moved to Amherst from another New England state in 1965, and will be moving to a new location this summer. Karen has lived in three states. A younger brother, age 10, and a sister, age 5, complete the family.

Karen is a big girl, about 140 pounds and five feet three inches tall. She is in good physical health and has had no unusual childhood diseases.

Karen

Karen has definite ideas about school. She feels that if school were not mandatory, her parents would probably teach her. However, keeping in mind two reservations, Karen does like school: if she had her way "the kids wouldn't have as much freedom as they do here;" further, "I would add more phases, because as it is now, there isn't enough difference between one phase and the next."

She seems very close to her parents. "We discuss any problems which come up in the family; also if a new baby is going to be added to the family my parents sit down with us and tell us." Karen seems very happy with home.

Karen seems to have a positive attitude toward her friends, "I've taken part in many organizations in school in order to be with my friends more." Also there appears to be no problems between her teachers, counselor and herself.

Karen has shown a strong interest in going to art school after high school. She has mentioned the Rhode Island School of Design as a choice. She also said, "Perhaps I might like to be an elementary school teacher for I think I'd like to work with younger children."

Karen seems quite confident that she will be able to go to art school or teachers' college.

In discussing her plans for the future, she thought her parents are most influential. "I discuss going to college especially with my father; he definitely wants to see me go on after high school." Discussion with friends, occasional consultation with her art teacher--

although not with her guidance counselor--and reading of college catalogues indicate the thought Karen is giving to the future.

Karen has done well on mental ability tests. On the Otis Beta she scored in the 96th percentile and on the Gamma in the 95th and 94th percentiles. She scored in the 81st percentile in the PSAT verbal and in the 43rd percentile in the math section. Refer to Table III. College plans are not unrealistic for Karen.

In the ninth year she took three phase III subjects and two phase IV subjects, earning four B's and one C. The tenth year she took two phase III subjects and four phase IV subjects, earning four B's and two C's. Refer to Table I for the current year's marks.

Karen has not made the honor roll this year. She felt that the three marking periods went well although she did not make the honor roll and considers it important to do so. According to Karen, all of her friends have a similar regard for the honor roll.

Karen's favorite subject is art "because I like art in itself, and I want to be an art teacher." On the other hand, chemistry is her least-liked subject "because it's too hard to understand."

Karen conducts independent study in art. "I spend about three hours a week making various ornaments, such as pins and bracelets for myself." Karen has initiated the independent study for which she has received extra credit although she is not sure about a grade. One last comment summarizes the value of the work to her, "I think I'd do this type of work half the day, if they allowed me to."

Karen believes that all of her teachers grade well. Of English, she says "It's good, because he scales up to give us incentive to work harder." "Chemistry is hard but he makes us work." In art "he marks well but it's hard to judge creative ability." French and algebra have marking systems which give a fair grade.

Her comments about the homework in the various subjects were equally favorable. "In English we have mainly essays, and it's good because it makes me feel independent." In chemistry and art she told the interviewer that no homework is really given. Karen likes her homework in both French and algebra "because we need constant work to keep up in these areas."

Karen's friends play a role in her phase selection. "I do want to be in the same classes as my friends, but I have friends in almost every class anyway." She said that the counseling center "fouled me up; they told me I needed chemistry and I really didn't but I took it because I didn't want to get into any trouble." Karen's parents are the most influential in her phase selection. "My parents are really interested in the phases I take. They don't tell me what phase I should take, but they want to know why I take certain ones." Finally she revealed that she takes higher phase courses because her parents "sort of pressure me into it." Karen did not change phases this year but she explained that she should not have gone into phase IV chemistry.

Karen

Karen is in a host of extracurricular activities. In school she is a member of the Art Club, Tri-S, and The American Field Service. Outside of school she is a member of the Girl Scouts and the Confraternity of Christian Doctrine. She attends all these activities regularly except the Art Club in which she occasionally participates. In her spare time, Karen reads novels and once in a while watches television. Last summer she took personal typing at the University and organized a school play for little children. She also babysits quite regularly. Karen's friends are all in phase IV. Only one friend is in the fourth socio-economic category and the rest are in the second.

Teacher remarks included the following: One mentioned that "Karen is unsure, uncertain and tense," another said that "she speaks well and she likes children," and a third thought that Karen is a pleasant, phase IV, C student.

Karen tries to please others, especially her parents. Everything points to this--the honor roll, phasing and her desire to get into college. Because of her desire to please her parents she may be taking some subjects which are a little above her ability. Phasing has worked well for her in most cases with the exception of chemistry. Karen may need assistance for phase selection so that she will not go "over her head" in areas of difficulty.

KAREN

TABLE I

Course

Term	English Phase IV			Chemistry Phase IV			French II Phase IV			Art Phase IV			Algebra II Phase III		
	*G	C	E												
1st	B	1	1	D	1	1	B	1	1	B	1	1	B	1	1
2nd	A	1	1	C	1	1	B	1	1	B	1	1	C	1	1
3rd	B-	1	1	D	1	1	C	1	1	B	1	1	C+	1	1
Final	B			C			B			B			C		

* G: grade
C: conduct
E: effort

TABLE II

Methods of instruction in order of frequency

English Phase IV	Chemistry Phase IV	French II Phase IV	Art Phase IV	Algebra II Phase III
Discussion Read & Recite Audio-Visual	Experience Project Discussion Audio-Visual	Read & Recite Audio-Visual	Lecture Experience Project	Problem Solving Read & Recite Discussion
		General Comments		
"It's good, because we're given a lot of independent work. We have to report in at a certain time, whether we've read the book or not. It's just like college."	"It's good for phase IV, because it stimulates you into doing the work."	"It's good, because I enjoy the conversational method."	"It's good too, because we're allowed a lot of freedom to do independent work."	"It's good, the teacher goes into a lot of detail."

KAREN

TABLE III

Test Name	Date	SS	%ile	Norms
Otis QS Beta	10/63	121	96 %ile	Nat'l
Gamma	11/65	120	95 %ile	"
Gamma	1/67	119	94 %ile	"
PSAT verbal		44	81 %ile	"
math		34	43 %ile	"
Orleans Soloman Latin Prog. Test	9/64	139	not avail.	"
Orleans Soloman Alge. Prog. Test	"		79 %ile	"
Standford Ach. Adv. Math	9/65			
comp.			54 %ile	"
concepts			85 %ile	"
application			68 %ile	"

Class of 1969, Phase IV VANCE
11th year

Vance is a very pleasant and friendly young man. His cleanliness and fine taste in clothes are readily apparent. Even more apparent, however, are Vance's confidence and stability which he possesses to a degree rare among students of his age. Vance wants to go to a small liberal arts college, knows he will be accepted and expects to do well.

Vance's father is a professor at the University. His mother has been an Army nurse, but she is not employed at present. Vance's older brother is a sophomore in college and his younger brother is still at home. The family is quite mobile; in fact they moved to their present location just a few years ago.

Vance has had the typical childhood diseases and is in good health. He is of average weight and height for his age.

From our discussions, it became apparent that Vance has a positive attitude toward life. He enjoys school considerably and would attend school even if it were not mandatory because he enjoys being with his peer group and he derives much pleasure from learning in general and from science specifically.

Vance has mentioned that the discussions which his family has are most beneficial in learning about current events and mutual problems. He believes that because family differences are discussed, there is a definite rapport among all members.

Vance

Vance is in phase IV in English, French and physics. A phase V in algebra II and a phase III in U.S. History complete the subjects he is presently taking. He is taking five subjects next year, not including physical education and speech. He will take advanced biology, French IV, man made world and English, all phase IV subjects. Elementary functions will be a phase V course.

Vance indicated that after high school he wants to attend a four year college and "after college I think I'd like to go on to a technical school to study engineering, medicine or oceanography." "Perhaps Cal Tech or MIT would be right for me."

Vance generally takes the responsibility for directing his own education. "I do talk to my parents about what colleges I want to go to, but they do not tell me outright that I should go to one school or what I should major in." He appears to make the final decision.

The faculty, counseling center and his friends have not been very influential in his plans. "I have discussed my plans with my counselor and certain friends, but not that often." Finally, he has asked his algebra teacher which schools or colleges have good math and science programs.

College plans seem consistent with Vance's standardized test scores. On the Otis Gamma test which he took he has scored in the 88th and 99th percentiles respectively in 1965 and 1967. On the PSAT he has done equally as well (refer to Table III). In order to implement his plans, he need only continue the work that has been characteristic of his performance thus far.

Vance

Vance is a transfer student from an out-of state parochial high school. Grades of 95 in algebra in the ninth year and 95 in chemistry in the tenth year are typical of his excellent grades there. His overall average for these two years are 91 and 92 respectively.

This year Vance has made the honor roll at Amherst. He says that it is important to him to be on the honor roll "because first it looks good on the record and second it helps you get into college."

Vance enjoys and does best in physics. He claims that he does well because he derives so much pleasure from studying this subject. On the other hand he is not fond of French at all. Vance does not understand the value of a foreign language. Instead he feels that another subject such as calculus would be much more beneficial to him.

Vance is conducting independent study in his algebra II course. He spends approximately three to four hours a week on it. Specifically, "I study series, limits, logarithms and other areas of algebra," using a book besides the class text. He said that the supplementary textbook is difficult, especially those concepts presented at the beginning of the chapters. "It is often better to start at the end of the chapter and work forward." Finally, he said that independent study is a valuable learning experience.

Generally speaking, he believes that his homework in English is beneficial in that it made him think about what he read. In other words, he feels that reading essays in preparation for class discussion is valuable homework. The homework in algebra II and physics is valuable.

Surprisingly, he feels that the homework in French is valuable most of the time.

His comments about the grading systems used by his teachers covers a wide range of opinion. "In algebra he's very good, because he doesn't take off for silly adding or multiplication mistakes." Of French he said, "she marks well; she gives you what you deserve." Physics is good too "because he gives partial credit." Of the grading in English, Vance thinks that the teacher grades too easily. Finally, in U.S. History, "It's O.K., because he scales up, so it's not that difficult."

Vance participates in squash and soccer and attends both daily during the season. He does not belong to any service or church affiliated groups, but he does date occasionally, usually for a school dance or an athletic event.

Reading occupies much of his spare time. Vance also plays squash and handball frequently at the University. In the summer he teaches tennis and sailing. The occasional television programs he watches are newscasts or documentaries. Most of the friends Vance has made in his short time here are in phase IV but two are in phase III classes. Most of his friends' parents are in the same socio-economic category as Vance's father.

Vance's teachers believe that he is a friendly, good humored, pleasant boy. They agree that he thinks and works thoroughly and they see him as having good work habits. In general most teachers would maintain that Vance is an excellent student.

Vance

The ungraded program has given Vance the opportunity to study in depth subjects he enjoys. He said that "the phasing program is good, because it allows one to take a lower phase in required courses in which one is not interested." "This gives the student more time to study subjects of greater personal interest."

The ungraded system has provided Vance with the opportunity to develop a greater interest in specific areas, i.e., math and science. Vance has taken the responsibility for directing his own educational program. As a result, he knows what it means to succeed.

TABLE I

Term	Course														
	English IV			US Hist III			Algebra II			Physics IV			French IV		
	*G	C	E												
1st	A	1	1	B	2	1	B	1	1	A	1	1	B	1	1
2nd	A	1	1	A	2	1	B	1	1	A	1	1	A	1	1
3rd	A	1	1	B	2	1	B	1	1	A	1	1	B+	1	1
Final	A			B			B			A			B		

* G: grade
C: conduct
E: effort

TABLE II

Methods of instruction in order of frequency

English ph IV	US Hist III	Algebra II	Physics ph IV	French IV
Supervised Study Problem Solving Discussion	Lecture Read & Recite Audio Visual	Problem Solving Lecture Question & Answer	Lecture Problem Solving Experience Projects	Audio Visual Read & Recite Question & Answer
General Comments				
"We don't discuss books enough in class We're allowed to read independently too much in class. We could use that time for discussion."	Method has purpose all of the time because "he tries various methods of instruction all of the time."	"It's O.K. as long as you're willing to go go in for hcip once in a while. "It's completely independent work."	The method has purpose all the time "because he explains things well."	"Her method is good for the type of subject."

TABLE III

VANCE

Test Name	Date	SS	%ile	Norms
Otis QS Gamma	2/65	114	88 %ile	Nat'l
Otis QS Gamma	9/67	128	99 %ile	"
PSAT verbal	67	44	84 %ile	"
math	"	59	95 %ile	"
SAT verbal	3/68	470		"
math	"	623		"
Achievement physics	"	513		"
math 2	"	609		"

Class of 1969, Phase IV VERA
11th year

Vera appears to be a rather shy girl, a little nervous during the interviews and not given to elaboration in answering the interviewer's questions. She evidenced specific and firm ideas when she answered the questions. She is neat and well-dressed. Vera wears glasses, is five feet eight inches tall and weighs 120 pounds.

Vera is a phase IV student with the exception of phase III English. She does well in her subjects, maintaining a majority of A's in most of her courses. Refer to Table I.

Vera's father is a professor at the University and her mother also works there as a technician. Both parents have had schooling beyond college. Her older brother attends the University and her younger brother is a freshman in high school. The family is in the second socio-economic category.

Vera is in good physical health although she wears glasses all the time. She had mumps, measles and chicken pox as a child but has since had no other illnesses.

Vera's attitude towards school is generally positive although she believes that the five-major subject requirement is not feasible: "I feel that if we could take less courses, we could spend more time on subjects which interest us."

Her generally positive attitude is also obvious when talking to Vera about her family. "I enjoy discussing my future with my parents. I also talk to them about certain problems which I have but not all problems." She also enjoys discussing current events with them.

Vera also seems to have a good deal of respect and confidence in herself. She knows where she is going, she has already limited her choices of college to two; she knows what field of work she wishes to undertake.

Vera intends to take five pre-college courses again next year. Her one phase V course will be advanced biology. She will take two phase IV courses, man made world and modern problems; English and physics will be phase III courses.

After high school, Vera plans to enter either Ithaca College or the University of Pennsylvania. She wants to major in physical therapy, a plan she has had for four years.

Vera is not only confident that she will be accepted by one or the other or both of these colleges, she also is sure that she has the ability to become a physical therapist. "I think that if I put my mind to it, I'll be able to become a fairly good therapist; I've been interested in biology and related areas for a long time now," even before she entered high school.

When asked if anyone was responsible for her plans, she replied, "No, on the whole, no one has really influenced me; I've been reading and studying biology for a long time. I will admit, though, that some of my teachers in the sciences have given me further inspiration for biology." Other than her teachers, Vera feels that no one else has biased her liking for biology.

Vera

Vera's standardized test scores provide evidence that she is an intelligent and able girl. Refer to Table III. Her Otis Beta and Gamma scores were both at the 95th percentile; Iowa tests of Basic Skills' composite of all tests, 87th percentile. On the PSAT, she scored at the 90th percentile in both the verbal and math tests.

Vera's grades are excellent. In the ninth year she took all phase IV subjects and received two A's and three B's. In the tenth year she received all A's for final grades in three phase IV subjects and two phase III courses. See Table I for current grades.

Vera does not feel that it is important to be on the honor roll. Her explanation is, "It doesn't mean anything. Anyone can go to a lower phase and make it; it isn't an accurate evaluation of what a student, especially a top student, is doing."

Because Vera really enjoys laboratory work, she considers biology and chemistry her favorite subjects. On the other hand, she likes German least because, "I just don't like foreign languages. I think it's ridiculous to have to learn a language which you'll never really use."

Vera does not take part in independent study at the present time. During two previous terms she did a variety of experiments and readings in chemistry independently. The work, initiated by the teacher, took between two and three hours a week; she found it difficult "because I didn't study for it." She earned an A for the work but noted that since she could not remember specific experiments, she perhaps "didn't find it valuable after all."

Her comments about the grading systems were extensive. "The system used in German is good in most cases, but the teacher claims the grade isn't important, then makes it more important by marking hard." In chemistry she believes, "He's pretty good, because we compete against each other not for the grade." Both U.S. History and English are good systems according to Vera, because marks aren't based on opinion or subjective judgment as they are for her biology lab assistantship.

Vera said that as far as homework is concerned, she did not have any in biology. She especially enjoys the homework in U.S. History because "the pamphlets we read are very interesting." In both English and German she thinks homework is "O.K." because it prepares students for class. Finally, she said of the chemistry homework, "I can't see any better way; we have to do the papers and the work problems."

Vera changed phase this year. She decided that her phase IV English course was too difficult so she dropped to phase III. Moreover, she did not want to spend "as much time as necessary doing the required work." She said that her parents were also influential in her decision to change. She is happy with the result and plans to take phase III English next year.

Placement into the various phases was mostly Vera's responsibility. "I decided to go along with three of the five recommendations which the teachers offered. Also I talk over the phases with my parents, but I don't think that they really influence me, nor do my friends and counselor influence me."

Vera belongs to a number of school organizations. She is a member of the girls' track team, the Tri-S, the Goldbug (yearbook), the American Field Service and Biology Club. She attends all of these functions regularly but is not an officer in any of them.

In her spare time, Vera knits and sews a good deal. She said that she doesn't read very much in her free time "because I have enough of that with school work." She occasionally watches television, but she said "I don't stay up very late during the week or on weekends."

Vera's friends are in the second socio-economic category, except one who is in the third. Two of her friends are in the fourth phase in English and she listed one friend in phase V and one in phase III English.

Teacher comments about Vera were short and to the point. "Vera is a good student." One teacher felt that Vera wasn't challenged in school work but added "she has good study habits." Another said that Vera has a serious personality.

The phasing program has provided Vera with the opportunity to make her own decisions. It seems that Vera should be encouraged to take a higher phase in physics next year since she has done very well in science laboratory work. Finally, Vera has taken advantage of the opportunity for directing her educational program provided by the non-graded program.

TABLE I

VERA

Term	Course: English III			Biology lab ass't IV			German IV			Chem IV			US Hist. IV		
	*G	C	E												
1st	A	1	1	A			A	1	1	A	1	1	B	1	1
2nd	A	1	1	A			B	1	1	A	1	1	B	1	1
3rd	B	1	1	A			A-	1	1	A	1	1	B+	1	1
Final	A			A			B			A			B		

* G: grade
C: conduct
E: effort

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TABLE II

Methods of instruction in order of frequency

English III	German ph IV	Chemistry IV	U.S. Hist IV	
Read & Recite Lecture Discussion	Read & Recite Question & Answer Audio Visual	Experience Projects Discussion Audio Visual	Discussion Audio Visual Question & Answer	
General Comments				
"It's no good. She doesn't seem to have the interest and it's not generated to us."	"It's good, because I'm interested in learning how to speak the language more than anything else."	"It's good; especially fun are the debates and discussions we get into."	"It's pretty good; because we can give our own opinions and it's more interesting. He often presents an-	other side of the argument which we don't think of."

TABLE III

VERA

Test Name	Date	SS	%ile	Norms
Otis QS Beta	9/63	120	95 %ile	Nat'l
Otis QS Gamma	9/67	120	95 %ile	"
Iowa tests: Arith	9/63	not avail.	94 %ile	"
total lang. skills	"	"	90 %ile	"
work study skills	"	"	88 %ile	"
language	"	"	89 %ile	"
composite URLWA	"	"	87 %ile	"
DAT verbal reasoning	9/64	29	85 %ile	"
num ability	"	15	35 %ile	"
UR & NA	"	44	70 %ile	"
abstract reas	"	42	95 %ile	"
cler sp. & acc	"	56	95 %ile	"
mech reas	"	42	80 %ile	"
space rela	"	48	99 %ile	"
lang spell	"	56	35 %ile	"
lang gram	"	37	85 %ile	"
PSAT verbal	67	50	90 %ile	"
math	"	51	90 %ile	"
SAT verbal	3/68	541		"
math	"	587		"

Class of 1969, Phases IV and V EMMA
11th year

Emma, born in December 1951, is 66 inches tall and weighs 149 pounds. She responded willingly to all questions and frequently requested clarification in a manner that indicated her answers were being given in a thoughtful, evaluative mood. Emma is an attractive girl -- extremely pleasant, intelligent, and mature.

Emma is in her eleventh year of school and has maintained an outstanding academic and social record to date. Since her ninth year she has been in only phases IV and V in a pre-college curriculum. In that time she has earned predominantly A's. Her tenth year was outstanding in that she earned all A's. Her total grade history, from grade one, has been a record of A's and B's, leaning toward B pluses. This year she is carrying six courses, as she did last year -- treating each course with complete interest, enthusiasm, and industry.

Emma is the daughter of a department head at the University of Massachusetts. Her mother died in 1961 and her father has since remarried. Her stepmother is primarily a housewife, although she occasionally acts as a substitute teacher. She has a BS and MS in home economics. Emma is the older of two sisters; her younger sister is in the ninth year of school and is also an excellent student. Her home environment is rich in current magazines, and an extensive library with adequate reference books is available to Emma. She does some homework in study hall but does most of it at her desk in her room at home. Because of her heavy course load, she is limited as to study time at school. All four family members have, and use, library cards. Emma also said she uses the library at the University by virtue of her father's position at the school. The family is educationally oriented and scholarship is encouraged.

Emma presents an extemely healthful appearance and has had only the usual childhood diseases and immunizations.

Emma would appear to be a well-adjusted and mature individual. She experienced no difficulty in responding to the questionnaires and her responses were arrived at in a way that indicated her desire to give a valid answer. Some difficulty was encountered in scheduling interviews because of Emma's heavy work load, although she always arrived as scheduled and remade her appointment, if it were in conflict with her class schedule.

Emma stated her goals to attend college and become a recreation teacher which is her father's field. She was quite firm in stating her goals and has made her plan in consultation with her parents.

Emma plans to complete her twelfth year of school with no change of phase nor of academic load; she will take six courses next year as she has for the past two years.

She is sure that she will attend college, and is relatively positive of her choice of a vocation. In interviews, there was never any hesitation on her part in stating her academic and vocational goals.

Emma has had, perhaps, more help than the average child from her parents, in that they both possess graduate degrees, and her father's vocation is in the area that Emma has chosen for herself. She said that involvement of her counselor was only to the extent that she informed him of her goals, to which he agreed. Her peer's involvement consisted only of discussion of careers. Factors involved in her choices were general interests, and her awareness of her performance on standardized tests.

Emma's PSAT scores in 1967 placed her in the 96th percentile, verbal skills, and the 99th percentile, mathematics skills. Her SAT scores in March 1968 were 611 Verbal and 687 Math. On the National Merit Scholarship Qualification Test, her scores placed her in the 91st percentile. Standardized test scores indicate a strong possibility of Emma's achieving her goals.

Emma's grades have been A's and B's since she entered school, with emphasis on B pluses. Her tenth year grades were all A's as were her eleventh year grades. She has performed in outstanding manner academically, and in phases IV and V in the past three years.

Emma has achieved the honor roll during the past three years. Emma said of the honor roll, "It's important to be on the honor roll insofar as it indicates good grades, but it has no status because of the phasing, which enables anybody to make it. It's important if it is the criterion for self-development."

Emma could name no pronounced likes and/or dislikes of her courses. She said, "I just like everything I'm taking; I'm just grossly enthusiastic." She likes having older students in her classes, as she finds it "more challenging." She thinks "it's great they feel so motivated" about having younger students in her classes.

Emma engaged in several independent study projects during her eleventh year. A biology project involving historical and contemporary research was urged by her teacher. It is an oral report on color vision for which she anticipates a grade of B. She had to read three or more works of a major author for English and then prepare a written criticism of the writer. This project also was urged by her teacher. In the purely creative arts, Emma, upon her teacher's urging, has done many drawings in pencil. On her own initiative, she decided to try her hand at oil painting. She anticipated a grade of B for her art projects, and felt she "probably" would be graded for her English criticism. In discussing all her projects, Emma was highly enthusiastic and did not indicate that she considered any of the extra work involved to be an imposition in any way on her already full schedule of activities.

Emma felt that the grading system was a good one in that, "It gives every kid a chance for A's." She attributed this possibility to the phase system. She also thought it fair because of the weighted values of grades according to phase level. She said, "My primary concern is that I get good grades in my phases."

Emma considers all her homework to be of "value all of the time," except algebra which she rates as "valuable most of the time." She had no idea of the weight her homework carried in her total grade, except for French and art which count 50 and 75 per cent respectively. She stated she had "plenty of it" when asked about homework but she added that she found none to be "busy work."

Emma said there were from two to five or more instances of out-of-class resource utilizations for each course except English which had none. She rated all instructional methods to which she was exposed as "good," except English, which she reported as "OK." Her feelings on the outcome from each course were "good." See Table II for specific evaluations.

Recent standardized tests recorded in Emma's file were the PSAT, SAT and National Merit Scholar Qualification Test, cited previously. Other test scores recorded for Emma are a Binet IQ of 137 in 1957, an Otis Quick Scoring (Beta) of 128 in September of 1963, and another Otis (Gamma) of 131 in January, 1967. It would appear that her school performance and her standardized test scores correlate highly.

Emma's phases are five in English and algebra; four in French, U.S. History, art and biology. Her grades are all A's. The only apparent suggestion would seem to be that she might be able to perform as well if she up-phased her fours. It appears that she can manage the requirements of the phase choices she has made. Her phases were chosen, as mentioned earlier, after consultation with her parents and counselor, in that order. Factors influencing her phase choices were previous marks, awareness of standardized test scores, and general interests. The interviewer felt that Emma made up her own mind and permitted parental and counselor approval of her choices, as she appears thoroughly aware of her abilities and/or limitations.

Emma

Emma is not in the tradition of the "greasy grind" as she is involved in many and varied activities outside the purely academic. She listed as her five major activities: Tri-S, a school service group; French Club, obviously academic in nature; American Friends Service, a community service group; Four-H; and National Honor Society. She was quick to add that she was involved also as active in school publications and as an occasional church youth group participant. She cited leadership positions in Four-H only, although she will be assistant editor of her school publication "Gold Bug" next year. The five closest friends include one she has known only this year, one from last year, and three before last year. All are phase III to V students, except the girl she named as her closest friend who is a graduate of Westfield State Teachers' College. The interviewer noticed Emma a number of times in the corridors, and her companions tended to vary. It would appear that she is a friendly girl whom many others like.

There is no record of previous teacher's comments in Emma's folder. The interviewer, in conversation with teachers who have Emma and with those who know of her, could learn that she was a "wonderful" girl, "so wise for her years." Adjectives used to describe her were "vivacious" "intelligent," "mature," "adult," "exceptional." It may be assumed she is held in high esteem by the faculty of Amherst High School.

To reiterate, Emma was an excellent participant in the study. It may be seen that she is a good citizen of her school and her community. She appears to relate well with her family, peers, and faculty. It would appear that she can only benefit from the nongraded, phase system of Amherst, as she seems aware of her abilities and her opportunities; and seems equally determined to make the most of both. Interviews were animated and interesting for the interviewer, and it is estimated from her responses that they were for Emma too. Because of her high standardized test scores, her continuous good scholarship and social behavior, Emma will be able to realize her goals for a college education and for a career as a recreation teacher. She would appear to owe much to her family which encourages her in her ambitions and her endeavors. It would appear that aptitude, ability and environment are in Emma's favor.

Emma

TABLE I

Term	Course															
	English V			History IV			Alg. II/V			Adv. Bio IV			French IV			also Art IV
	*G	C	E													
1st	B			B			B			A			A			A
2nd	B			A			B			A			A			A
3rd	A			A			A			A			A			A
4th																
Final	A			A			B			A			A			A

* G: grade
C: conduct
E: effort

TABLE II

Methods of instruction in order of frequency

English V	U. S. History IV	Alg. II/V	Adv. Biol IV	French IV
Discussion	Discussion	Discussion	Discussion	Discussion
Question & Answer	Question & Answer	Problem Solving	Group Research	Question & Answer
Group Research	Problem Solving	Lecture	Experience Projects	Lecture
General Comments				
Good	Good	Good	Good	Good

Also Art I, ph. 4:
method: Discussion, group research, experience projects
comment: Good

TABLE III

Emma

Test Name	Date	SS	%ile	Norms
Standford Binet	1958	137		Nat'l
Otis QS Beta	9/63	128		"
Otis QS Gamma	1/67	131		"
PSAT	1967	verbal 58	96%ile	
		math 64	99%ile	
Supp Ach	2/68	FRLCT 665		
		verbal 611		
SAT	3/68	math 687		

Class of 1968, Phase II, III WARD
12th year

Ward is a very nice looking young man, average build, well dressed and well groomed. He was very cooperative in answering questions but he did not volunteer information. Although he was rather abrupt in his answers, he did not appear to be nervous, nor did he seem in any hurry to end the interview. Ward did not appear to be very confident of himself or of his future, "I'm not sure whether I want to go into the Marines, or whether I want to take a post graduate course."

Ward has two phase III subjects--mechanical drawing and algebra I, and two phase II subjects--English and ancient history. It should be noted that Ward is on the work study program. He leaves school at 12:00 noon and works in town during the afternoon. His grades this year have fluctuated slightly. Refer to Table I.

Ward's father is a male attendant at a nearby hospital; his mother is a housewife. Only his mother, however, graduated from high school. Ward's father went to school for eight years. Ward has one older brother who is a high school graduate and is now working and an older sister has graduated from nursing school. All the children were reared in Amherst.

Ward had no unusual diseases as a child. He appears in good physical health.

Ward seems to be groping for the answer to his future. He is not especially keen toward school: "It's O.K., but I can't see why kids go to college for four years then get out and get a job they might have been able to get after high school." He sees education after high school as a waste of time. Later he added, "I don't really come to school to meet my friends either, I could meet them up town more easily."

Ward's attitude toward his family is best expressed by his own statement. "I'm really not home enough to get close to my parents; I do talk about things with my brother occasionally."

Although Ward is a senior, he might decide to take a post graduate course next year. If he does, the subjects he will take are mechanical drawing, algebra II, geometry and physics. The first two subjects will be the same phase as this year (III and II respectively) while the last two are new courses. Although he might decide to go into the Marines, he said "I still haven't completely decided against college, because in a way I'd like to be an engineer some day." Doing post graduate work "will give me more time to think about my future." This attitude toward college developed in the second half of the year. During the first half of the year Ward seemed to be pretty much against college.

Ward seems to be groping for time and confidence in his future plans. He told the interviewer that "no one really helps me plan my future." "I never really talk to parents about it...they're not that interested." Furthermore, he does not talk to teachers, counselors or his friends about his future plans.

Ward's standardized test scores indicate that he is above average in mental ability. He scored in the 62nd and 63rd percentiles on the Otis Beta and Gamma Tests. He did fairly well on the Differential Aptitude Test, scoring especially well on the Space Relations, 95th percentile, the Abstract tests, 80th percentile. The interviewer believes that if Ward had more confidence in himself, he could go to college. He has no direction and looks for advice from no one, but if he were given encouragement he might set his career goals higher.

In the past, Ward has done B work. In the tenth year he earned three B's and two C's. The eleventh year Ward earned an A in algebra, two B's and one C.

Although Ward made the honor roll both the first and second marking periods he does not think that it is important to be on it. In his words "It's not important because it's just trying to impress people and it's stupid. Anyone can make it."

Ward's favorite subject is English "because it's challenging and it helps me in my ideas of things, novels, etc." On the other hand, ancient history is his most disliked subject "because the teacher thinks we should know more about history than we actually do."

Ward conducts independent study in algebra. He studies from a book in addition to the text used in class. When he finishes a chapter he takes a test to see how well he is doing. He finds no difficulties and works approximately one hour a week on it. Ward does find it valuable and has received an A for the work done so far.

Ward

Ward did not have much to say about the grading system used by the various teachers. He said only that they were good in English, mechanical drawing and algebra. He added that he did not like the method in ancient history "because she marks on what we knew before we came into the course, not on what we learn in the course."

He finds the homework valuable in English and history "because without it, we could not have class discussion." Ward said that they had no homework in mechanical drawing. In algebra he finds the homework valuable.

Ward maintains that he and the counselors are responsible for his phase selection. "I hardly talk to my parents about it." The only time he talked to a teacher about phase selection or placement was two years ago for an English course.

Ward takes no part in organizations in school because he doesn't have time with the work study program. In his spare time, he reads Life, Post and other periodicals but only articles in these magazines "which strike my eye as interesting." He also spends time up town with his friends. Occasionally he dates. All of Ward's friends are in phase II, except one who is in phase III. His friends do come from a wide range of socio-economic groups, however.

There were many comments from teachers about Ward. One said that "It's hard to figure out Ward's thinking about the future." Another said "Ward seems quiet but respected by his peers." "He rarely questions, always accepts fully, some insight, mild, politely attentive." One teacher notes: "Ward is more intelligent than...achievement tests indicate." Finally one teacher felt that "given the chance, Ward would do well at the University."

One comment by Ward might summarize whether or not the phasing program is benefiting him. He said "I like phasing because I can go into lower phases and I don't have to do as much work." This is one problem with phasing and phase selection which cannot be overlooked; lacking confidence he tends to pick a lower phase in order to avoid failure with a minimum of effort. With a little more confidence, Ward could be in higher phases commensurate with his ability, especially in math.

TABLE I

WARD

Term	Course														
	English II			Mechanical Drawing III			Ancient History II			Algebra III					
	*G	C	E												
1st	B	1	1	A	1	1	B	1	1	A	1	1			
2nd	A	1	1	A	1	1	C	2	2	B	1	2			
3rd	B	1	1	A	1	1	C	2	2	C	1	2			
4th	B	1	1				D	3	1						
Final	B			A			C			B					

* G: grade
C: conduct
E: effort

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TABLE II

Methods of instruction in order of frequency

English ph II	Mech Draw III	Ancient Hist II	Algebra III	
Discussion Question & Answer	Experience Projects Audio Visual Lecture	Group Research Discussion Lecture	Read & Recite Lecture Question & Answer	
General Comments				
"The teacher presents the course so that it's challenging"	Ward believes there isn't much a teacher can do with a subject like this one. It's cut and dry.	"The subject is boring to begin with, so I don't like the way it's taught."	"This method is good."	

TABLE III

WARD

Test Name	Date	SS	%ile	Norms
Lorge Thorndike	4/1/62	115	not avail.	Nat'l
Otis QS Beta	5/63	102	62 %ile	"
Otis QS Gamma	9/27/65	104	63 %ile	"
DAT verbal	9/63	not avail	75 %ile	"
abstract	"	"	80 %ile	"
space rela	"	"	95 %ile	"
clerical	"	"	55 %ile	"
lang. spell	"	"	35 %ile	"
lang sentence	"	"	30 %ile	"
Iowa tests reading	9/27/62	"	56 %ile	"
work st. skil	"	"	76 %ile	"
arith skills	"	"	88 %ile	"
lang skills	"	"	61 %ile	"
composite	"	"	66 %ile	"

Class of 1968, Phase III FAYE
12th year

Faye is a senior with a business major. An attractive girl, she is 63 inches tall and weighs approximately 120 pounds. She was quiet, answering questions freely, yet not volunteering information. She responded pleasantly to questioning. She appeared to be quite composed and at ease during interviews and apparently interacts well with all adults.

Faye's scholastic record is difficult to describe because of a two-school, two-curricula situation covering her ninth through twelfth years. She spent her ninth year and the first semester of the tenth at another high school where she followed a traditional pre-college curriculum. The latter half of her tenth year, except for a 21 day intervening period at a third high school,was spent at Amherst Regional. She completed her tenth year at Amherst. During the ninth and tenth years, she earned grades of B and C. No other records are available for this period. From the beginning of her eleventh year, Faye has pursued a business course.

Generally, Faye's performance has improved to the point where she earns primarily all A's and B's. One C during each term has kept her from the honor roll.

Faye has elected mostly phase III courses and, while achieving well seems to have chosen phases not particularly taxing for her. One eleventh year teacher writes "above average ability. . . I believe she could achieve very well, especially in areas of special interest to her."

Faye

Another eleventh year teacher writes "not a good student . . . gets only fair to good marks in a phase III class . . . not very interested in academic pursuits." There would seem to be some inconsistencies in assessing Faye's classroom performance.

After her mother's death, Faye lived with relatives until her father's remarriage created a second home. Faye now lives with a cousin and her husband. This arrangement was reached when it became apparent that, although she got along well with her stepsister, she had some difficulties with her stepmother. Faye has lived in three quasi-foster homes since her mother's death. It appears that she has not been encouraged by home influences to aspire to education beyond high school.

There are no health records available for Faye. She states she has had the usual childhood diseases and immunizations, and that she has had no unusual medical history.

During the series of interviews, Faye appeared composed, sometimes placid. She never volunteered information but willingly responded to questions. She spoke freely and without bitterness of her difficulties with her stepmother. In follow-up interviews, she visibly brightened when she could report improvement in their relationship. Her only apparent bias was her statement during the first interview that "her stepsister could do no wrong and that just isn't true." She hastily added "we got along great though . . . it was her mother's idea."

Her ambitions include graduating from high school and getting an "office job." She expressed an ultimate goal of marriage and raising a family. To that end, she is cramming in as many business courses as she can in this, her final year at Amherst.

She states her future job preferences as stenographer, secretary, and key punch operator, in that order. Her courses in stenography, typing, transcription and office machines are intended to qualify her for an entry level in any of those areas. Although she listed an order of preference Faye qualified its importance, explaining that she "just wanted any job."

There are no indications of any career planning advice, nor did Faye cite any. However, Faye is confident of getting an "office job."

Unfortunately, only one test score is recorded. In September 1964, Faye scored 118 on the Otis QS (Gamma). Another indication of how her ability relates to her plans, however, is the judgment of an eleventh year teacher, "Her work reflects many of the qualities I normally associate as desirable qualities in the clerical occupation . . . punctuality, neatness, and thoroughness, along with accuracy."

Faye's grade history may be found in Table I. She has not achieved the honor roll this academic year. She states honor roll achievement is not important to her but "it impresses others." Following the second term report card, she said she did not think it important but "I would like to make it once."

Faye likes home economics best and modern problems least. Her stated reason for the former was "It's an easy subject." About the latter, she said "I'm not interested in the material covered . . . Russian history," because she felt the problems were not contemporary. Her likes and dislikes did not appear strong.

Faye conducted independent study for office machines and modern problems. Both studies were special class projects initiated by the teachers: the first involving problems done on a calculating machine; the second requiring research and preparation of a report on urban housing and development. The business study was primarily mechanical skills development: the second required library research. Faye expected and received grades of A for both projects.

Faye stated she had homework assignments for English, modern problems, stenography and office machines. Of these, only office machines homework received a grade, usually an A. Home economics and transcription required no homework. Despite the absence of tangible reward for some of her homework assignments, Faye found all her homework to be of "value most of the time."

Faye was divided in her evaluation of teaching methods, finding half "OK" and half having "purpose all of the time." She did not elaborate on the differentiation. See Table II for specific comments per subject.

In grade ten, Faye chose phase III for English and biology, phase II for geometry and French. She chose phase II for English and phase III for U.S. and Ancient History, and stenography in grade eleven. In grade twelve, she chose phase IV for home economics and phase III for all

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her other subjects. She says her choices were made without counseling, teacher or parental aid. Her guardians (cousin and husband) are aware of her choices. Faye conceded she "Probably could do some phase 4 work but 3 is easier."

Faye's activities are Business Careers Club in which she is vice president and Sunday School teaching. She "goes steady" with a draftsman who has an associate degree from a technical institute and thinks that this tends to remove her from high school social activities. Also she does not engage in as many school activities as she would like because of a transportation problem.

Although Faye has received no warning cards she has been disciplined once. In February 1967, she was required to serve four detentions for "cutting school" and forging an absence excuse. There are no other indications of unacceptable school behavior.

Records of teacher comments are scant. There is only one other than the two previously noted: "Possibly can perform better than I realize . . . dependable, mature, well mannered and pleasant to meet and be with in and out of class."

Faye was a willing subject in this study although questioning was usually required. She seemed disinterested without being hostile. "Disinterested" seems to also describe her recent school history. If this quality existed prior to the ninth year, it could not be ascertained from limited records available.

Faye

Faye's goals would appear to be quite attainable, considering her apparent ability. The school has not motivated her to seek higher aspirations. The self-selected phase system permitted Faye to select a lower level despite indications that she could have achieved at a higher level.

FAYE

TABLE I

Term	Course English Phase III			Mod Prob Phase III			Off Mach Phase III			Transcr Phase III			Shorthand Phase III			Adv Home Ec, IV
	*G	C	E													
1st	A			C			B			B			B			B
2nd	B			C			A			C			B			B
3rd	A			A			B			C			C			B
4th																
Final	B			A			B			B			B			B

* G: grade
C: conduct
E: effort

TABLE II

Methods of instruction in order of frequency

English Phase III	Mod Prob Phase III	Off Mach Phase III	Transcr Phase III	Shorthand Phase III	nd II	Adv Hom Ec, IV
Discussion Question & Answer	Discussion Experience Projects Audio-Visual	Experience Projects Problem Solving Question & Answer	Experience Projects	Experience Projects Question & Answer	ence s n &	Experienc Projects Lecture Discussio
		General Comments				
Good	O.K. Some purpose most of the time.	Good	Good	Good		Good

FAYE

TABLE III

Test Name	Date	SS	%ile	Norms
Otis QS Gamma	1/64	118		

Class of 1968, Phase III HELEN
12th year

Helen, a senior, is an attractive girl who, on first meeting, impresses one with the defiant expression on her face. Helen's mannerisms suggest that she has an independent nature. When she was first informed that she would be part of the research project, she indicated to the interviewer that she would think about it. Helen does not like to be told what to do.

Helen's mother has primary responsibility for the care and discipline of Helen and her two younger brothers because the father's job keeps him away from home a good deal of the time.

Helen had rheumatic fever when she was in the sixth grade. At that time her activity was limited. The disease did not leave any aftereffect and there is no history of any physical handicap. Except for being somewhat overweight at five feet three inches, 135 pounds, Helen appears to be in normal physical condition.

Helen does not like school. She feels that teachers are too restricting. She feels that she is a likeable person; although she enjoys the company of her peers, she is somewhat suspicious of adults.

Helen's high school courses have been heavily weighted with business subjects. She has taken most of the clerical and secretarial courses offered by the school and she has been on a work-study program during the latter part of this year.

Helen

When Helen first discussed career plans, she indicated that she simply had no idea what she wanted to do. She was emphatic about not wanting to go to college and doubted that she could get into one even if she wanted to. She said that she might go to Northampton Commercial College, not because she wanted to be a secretary but because she could not think of anything else to do.

One month before graduation Helen married. Because of low marks, there was some question about whether she would be able to graduate. However, after her marriage Helen attacked school work with a great deal of determination. She made up her work and did extra credit projects to raise her marks.

Helen will graduate, and although she still does not know what kind of work she will do, she seems to realize that if she and her husband are ever going to have enough money to raise a family she will have to work for awhile. She does not seem to be concerned about what kind of work this will entail.

Helen's mother was influential in directing Helen toward commercial courses. Her mother thought it best that Helen have some kind of marketable skill, an attitude which Helen seemed to resent. Although Helen was not particularly concerned about her future, she followed her mother's advice.

Helen entered the Amherst school system in the sixth grade. Her marks from grades six to high school were average, usually C's and

B's with a few D's. During high school her marks followed the same pattern. This year, however, Helen's marks showed a definite decline. She has received F's in three of her courses, and as mentioned previously, was in danger of not graduating because of low marks.

Helen has never been on the honor roll and stated that she does not consider it to be important. She said that a few of her friends did consider the honor roll important, but that generally, neither she nor her friends were concerned about marks or about school achievement. She said that whatever work she did was simply the minimum amount necessary to keep out of trouble.

Helen indicated that she liked English the most because she had a number of friends in that class and she liked the teacher. She disliked her modern problems class and felt that it was really too easy and that the teacher gave too many boring assignments.

Helen explained her low marks this year by stating that she had not done any work and that she really did not care. She had some personal problems that were of greater concern to her than her school work, and her studies took second place. Moreover, although she felt that the teachers had been fair in assigning marks, she believed that she was capable of doing better work than she had done.

Helen stated that she did not usually do her homework and that generally she did not devote more than three hours a week to the total amount of homework assigned in all classes. She felt that homework in stenography and office machines was usually valuable because it is the means of acquiring the necessary skill to pass the course. Helen was not passing office machines and was taking stenography for the second time.

Because she liked English, most of the time she spent on homework was devoted to this subject. She rated English homework as being of some value most of the time. She did not like all of the reading assignments and these she often did not finish.

Generally Helen seemed to feel that the methods of instruction were purposeful. The course she liked least was also the course where she felt that the methods served no purpose. See Table II.

Helen's performance on standardized tests is inconsistent. Her IQ is average, yet her performance on one achievement test varies from 61st to 27th percentile on different sections of the test.

Helen started her senior year in phase II English, phase III office machines and stenography, and phase IV modern problems. Helen took only four courses because she thought she had enough credits to graduate and she did not want to have to do any work that was not required.

She down phased in modern problems because the teacher required oral reports from phase IV students. The teacher would accept written reports from the phase III students. Helen said that she would not have given the oral reports and would probably have received a failing mark if she had not been able to down phase. In January, Helen added home economics to her schedule, started on a work-study program and dropped gym.

She added home economics because she feared that she might fail one of her other subjects and this new subject would help give her enough credits for graduation. She said she dropped gym first and foremost because she intensely disliked it and because work-study students do not have to take gym. She added work-study to her program because her afternoon was free, her father had gotten her a job at the University, and she would be able to leave school early. Helen's work-study experience was varied. She worked for a brief time at the University in a clerical position. She did not like the work and quit. She said that the job was mostly filing and that it was boring. When it became apparent that she would have to once again spend a full day in school and take gym, she found a waitressing job. She also left this job and later found another.

Helen was not active in any of the school or community organizations. She said that she preferred to "just spend time with my friends and go out on dates."

Although Helen did not receive any written warning notes, she apparently received many verbal warnings about her academic standing. As already noted she did not take any action until the last month of school.

Helen seemed to be constantly getting into trouble with her teachers. She received many detentions, not only this year but all during high school. Her violations ranged from chewing gum, to open defiance of teachers, to skipping classes. Chewing gum was one of the most common reasons she received detention. Usually the detention for this infraction was given by the same teacher. The second most common reason she was given detention was for skipping class. The class she most often skipped was gym because she "hated" it.

Teachers have commented that Helen was exasperating, independent, lazy. Her guidance counselor believes that she is a capable girl who has handled some difficult emotional problems very well. He believes that she is a very determined person and that she will make a success of her marriage.

Helen has had a history of problems in dealing with authority. It seems that, to some extent, the school system has been able to give her the lattitude of freedom she has demanded.

HELEN

TABLE I

Term	Course														
	English Phase II			Mod Prob Phase III-IV			Off Mach Phase III			Steno Phase I			Home Econ		
	*G	C	E												
1st	C	2	1	B	2	1	D+	3	1	C	3	1			
2nd	A	1	1	F	2	1	F	3	1	B	2	1			
3rd	D	2	1	C	2	1	F	3	1	C	2	1	B	1	1
4th															
Final	C	1	1	C	1	1	F	1	1	D	1	1	B	1	1

* G: grade
C: conduct
E: effort

TABLE II

Methods of instruction in order of frequency

English Phase II	Mod Prob * Phase IV, III	Off Mach Phase III	Steno I Phase III	Home Economics
	* Phase IV first and second terms; phase III third and fourth terms.			
	General Comments			
Very good; purposeful all of the time.	No purpose. "Teacher is boring and assignments too easy."		Homework essential to acquiring skills but "I rarely do the homework."	

TABLE III

HELEN

Test Name	Date	SS	%ile	Norms
Otis QS	9/62	105		Nat'l
DAT verbal	1963		35 %ile	
num			30 %ile	
abs			25 %ile	
sp			50 %ile	
mech			20 %ile	
cler			30 %ile	
spel			10 %ile	
gram			55 %ile	
Iowa Basic Skills	1962			
	grade 7		grade equ.	
voc			7.6	
read comp			6.1	
lang			6.8	
WK skill			7.1	
arith skill			7.1	
composite			7.0 49%	

Class of 1968, Phase V, IV, III RITA
12th year

Demure might best describe the first impression one is likely to have upon meeting Rita. Rita, a petite senior at Amherst, is somewhat shy, yet she has a warm smile and a friendly manner once she is more comfortable.

Rita is a better than average student. During this year her courses have included elementary functions, phase III; drama, phase IV, French IV, phase IV; English, phase V; history, phase V. Her marks have been all A's and B's.

Rita's father is a foreman at a factory in Springfield. He graduated from high school and had some apprenticeship training before he took his present job. Her mother is a secretary in Amherst. She went to a commercial college for a while, after she graduated from high school. Rita has one older sister who is a registered nurse and also a younger brother.

Rita is five feet one inches, 105 pounds. During elementary school, Rita suffered from an asthmatic condition. This condition has cleared up and Rita appears to be in good physical condition.

Rita enjoys a number of close friendships and a variety of activities. While she is somewhat reserved when meeting new people she does not appear to become ruffled. Although she does not exude enthusiasm, she displays a sincere interest in learning and in all the activities, and friends, she is involved with in her life.

Rita is sensible about her abilities and limitations, but at times she tends to be a romanticist. One might describe her as a girl whose feet are solidly planted on the ground and whose head is in the clouds.

Rita's course work in high school has been geared toward college entrance. She has taken primarily phase IV and V academic courses throughout high school.

Rita will attend a small, highly competitive women's college in New England. There, she plans to major in either English or drama. While she would like to either write or act, she is planning to become an English or drama teacher. Rita is sure that she will have no trouble attaining her goal of being a teacher, but doubts whether she has the talent to do really well in either writing or acting.

Rita has received encouragement from her English teachers and drama teacher. Her counselor has been helpful in the college admissions procedures. She has also received encouragement from her parents. However, Rita feels that she has been her own best source of advice.

Most of Rita's performances on standardized tests indicate that she has above average ability. She also seems to do especially well in verbal and word usage tests. Her interest in English seems to be compatible with her test scores in this area.

Rita does not feel that the honor roll is very important, because "just about anyone who wants to can make it." She feels that National

Honor Society is more important.

Rita likes her history course best because of the way it is conducted. The class meets only twice a week for discussion, the remainder of the time is devoted to independent study. Rita enjoys the subject matter in English and drama, more than history, but feels that history is her favorite class because she likes to be able to work independently.

Math is the course Rita likes least. This is her only phase III course. Rita decided to take a phase III course in math because she does not feel that she is very capable in this subject area. She is also not particularly interested in math.

Other than the independent work Rita does in history, she has not been involved in independent study. According to Rita, working independently in history is interesting, doing independent study projects in regular classes would just be extra work.

Rita feels that the system of grading is unfair in classes where students in different phases are mixed. Rita's math class has phase III, IV and V students. She feels that not only should there be either less or easier work in lower phases, there should be more leniency in evaluation of work done by students in lower phases. Rita thinks that he math teacher expects the same level competency from phase III students as from phase IV or V students.

Rita's homework is primarily reading and writing themes and reports. She feels that homework is valuable most of the time because it is a useful learning tool. Math is the only subject Rita feels is of little value. She spends very little time on this homework which is usually of a problem solving nature.

Generally Rita feels that most teaching methods are useful most of the time. She feels that the individual research and discussion in her history class are purposeful all of the time.

Although scores on intelligence tests indicate that Rita has above average academic ability, her scores on achievement tests are rather inconsistent. She scored 651 on the verbal part of the SAT and 473 on the math. Her math score on the National Merit Exam was at the 35th percentile, while her other scores on this test were well above the 50th percentile. Earlier tests in junior high school did not show this same kind of wide discrepancy between verbal and numerical ability.

Rita's difficulty with math appears to have been acquired since she entered high school. It may be that mathematical ability and interest is somehow incompatible with Rita's image of herself as a sensitive and artistic person.

Rita has made decisions concerning phase placement on the basis of her interests and abilities. Her parents have given Rita a free hand in making such decisions. They seem to feel that Rita is capable of making the right decisions for herself. Her marks indicate that her decisions have been appropriate. She would have probably had difficulty keeping up if her classes had all been in higher phases and would have been "bored" (as she was in math) if she had been in lower phases.

Rita has been involved in a variety of extracurricular activities. She was a member of Tri-S, National Honor Society and Ski Club. She was on the Student Council, the yearbook staff, the Public Affairs Assembly Council, and she was a cheerleader. The activities Rita liked best were work with the Public Affairs Assembly Council, work on the yearbook and Ski Club.

Rita has a number of long time friends. Most of them are also in phase V English. All of them are from families of higher social and economic status than Rita's family.

Rita seems to have taken advantage of the opportunities available to her in the ungraded system at Amherst. She has been able to more fully pursue her interests in history, English, and drama because she has been able to work in lower levels in subject areas that do not interest her.

Teachers feel that Rita is a good student. She is conscientious and quick to learn. She has never had any academic or disciplinary problems in school. She has done well at Amherst High School. She will probably continue successfully in her college career.

RITA

TABLE I

Term	Course														
	English V			Mod. Eur. Hist. V			French IV			Drama IV			Elementary Funct III		
	*G	C	E												
1st	A-	1	1	A-	1	1	B	1	1	A	1	1	A	1	1
2nd	A-	1	1	A-	1	1	B+	1	1	A	1	1	B	1	1
3rd	B+	1	1	A-	1	1	B+	1	1	A	1	1	B	1	1
4th	B	1	1	A-	1	1	B+	1	1	A	1	1	B	1	1
Final															

* G: grade
C: conduct
E: effort

TABLE II

Methods of instruction in order of frequency

English V	Hist. V	Drama IV	French IV	Math III
Lecture Discussion Oral Reports	Individual Research Discussion (2 class meetings per week)	Group Research Experience Projects Discussion	Discussion (in French) Question & Answer	Problem Solving Quizzes Review of Quizzes
General Comments				
Some purpose most of the time. (Rita would like more discussion.)	Purpose all of the time.	Purpose all of the time.	Some purpose most of the time.	Some purpose some of the time.

RITA

TABLE III

Test Name	Date	SS	%ile	Norms
Otis	9/62	122		
Otis	9/65	127		
DAT verbal	9/63		97 %ile	
num			80 %ile	
abst reason			65 %ile	
space rel			25 %ile	
mech			80 %ile	
cler			99 %ile	
spel			95 %ile	
sen			87 %ile	
SAT	12/67	verbal 651 math 473		
National Merit				
Eng			75 %ile	
math			35 %ile	
soc st			86 %ile	
nat scl			63 %ile	
word usage			93 %ile	
Iowa verbal	9/62		99 %ile	
read			98 %ile	
lang skills			98 %ile	
WK ST			98 %ile	
arith			93 %ile	
comp			99 %ile	

Class of 1968, Phases III & IV JAY
12th year

Meeting Jay was delayed as he failed to keep several appointments. However, he always saw to it that the appointment slip was returned to the project office with an appropriate reason noted thereon for his inability to keep the appointment. Later meetings were always arranged informally; the interviewer would encounter Jay in the corridor and Jay generally seemed able to spare ten or twenty minutes. On this latter informal basis, interviews were arranged quite smoothly and Jay proved to be extremely cooperative.

Jay is about 68 inches tall and weighs about 150 pounds. He converses easily and pleasantly, but persisted in a bored and disinterested attitude throughout the study. He was never hostile at any time, but seemed to prefer to project a "cool" image. By accepting that image without question, the interviewer discovered that Jay was really concerned about his school. He actually proved to be an excellent participant in the study, as long as participation seemed to be entirely within his control.

Jay has pursued a pre-college curriculum through high school at mixed three and four phase levels. His grades have been generally more C's than B's and it was not until his eleventh year that he earned his first A's (in chemistry). In this, his twelfth year, he has earned A's and B's and earned honor roll status for the first time. Teacher comments throughout his school history attest to his good ability, yet inconsistent study habits. They also indicate a gradually acquired maturity. This year, Jay indicated, it was necessary for a final spurt to insure college acceptance. Toward that end, he has exerted himself academically and extra-curricularly. Jay gave the interviewer the impression that he is a "last period" producer who coasts during the early part of the "game" and comes on to finish strongly enough to win. That, at any rate, has been the way he played the public school "games" as Jay referred to it during one interview. His energies were successful as he was accepted by the University of Massachusetts. This was his stated goal since his ninth year in school.

Jay's family is strongly oriented to higher education; his stepfather, a university professor, his mother a college graduate; his older brother, an Air Force officer, an honors graduate of a state university; and one older sister, a college graduate and teacher. He has a stepsister also a high school senior and a younger step-brother, a high school junior. The youngest sibling is a half-sister in the second grade.

Jay's father died when Jay was two years old. His mother remarried when Jay was seven. There is some indication that he went through a period of anxiety at this time, sufficiently disturbing that his parents referred him for psychological testing and examination. No further references to the anxiety appear in the available records.

Jay's records indicate he suffered the usual childhood diseases and underwent the usual immunizations. He wears glasses to correct his vision to 20/20.

Jay

Jay was an excellent subject despite the boredom he apparently feigned. He participated in the study willingly once the informal meeting pattern was established. He was involved in school affairs as a member of the Leaders Club and at first meeting with the interviewer, was preparing a newspaper article rebutting the inference that Amherst High School students were all "marijuana users, after last winter's 'drug scandal'."

As record comments indicate, Jay has matured, especially in his eleventh school year. At all times, the interviews were conducted at an adult level of participation, with which Jay seemed both capable and comfortable.

The five closest friends Jay named were all at phase four or five levels of academic participation. All were at a socio-economic level comparable to Jay's. All also came from families with academic orientation approximating that of his. In addition, the interviewer encountered him frequently in and around the school and Jay was always in the company of at least one other student, male and/or female.

In the seventh and eighth school years, Jay indicated a desire for a career in the USAF,"like his brother." Since grade nine, he has maintained a stated goal of attending University of Massachusetts and pursuing ROTC as part of his higher education. Interviews revealed he has no definite career field in mind, but it could be generalized to the area of mathematics or "science," as Jay broadly phrased it. The University ROTC availability may indicate a possible maintaining of his junior high school aspirations to the USAF, but he was not sure.

If one judges Jay's come-from-behind performance in his last year in high school, it appears he was quite confident of success. The goal of a college degree would seem possible, considering Jay's consistent average high school record through eleventh grade, followed by the twelfth year improvement, and also in consideration of his above average standardized test scores (see Tables I and III respectively).

There are no indications of sources of planning advice other than his own self help. It may be suspected that family influence and emulation of his older brother are present in Jay's decision making but there are no positive statements to this effect.

An indication of the self help exists in Jay's up-phasing in elementary functions course for one term only. He hoped by this move to earn the same grade (B) and thereby earn one extra quality point. He succeeded and then phased down again, as he had earned the one point he needed. This also tends to add to the proof that Jay has confidence in what he plans to do.

Jay achieved grades of B and C during years nine through eleven. Year twelve has seen grades of B and A. Again, reference is made to Table I for specific grades earned. Jay stated he did not consider the honor roll important in the Amherst system. He labelled it a "status symbol." He stated it is a device to permit those of lesser ability to "win a few." He made this statement matter-of-factly, with no apparent note of malice.

Jay named three equally weighted "most liked" classes -- physics, math, and man-made world. He preferred them for their subject content, coincided with his interests. "Least liked" classes were English and German because of "basic disinterest" in languages.

Jay stated the principal kinds of homework he was exposed to were textbook reading, study questions, and outside reading. He found his English and German homework to be "always valuable," his physics and elementary functions homework to be of "value most of the time," and his homework for man-made world to be of "no value." His stated reason for the latter opinion was unclear and probing failed to clarify the point.

Jay generally thought teaching methods he was exposed to were "OK" but those of physics and man-made world were "good," commenting that he "really respected" each of these teachers. Probing elicited his respect was for the teachers' subject knowledge as opposed to their presentation methods.

In years ten and eleven, Jay elected phases III and IV. In this past year he elected phase IV predominantly. His choices were his own, he stated. They have been wise choices inasmuch as Jay has maintained grades of C or better. Had he desired the challenge, it seems possible he might have achieved as well at higher levels.

Jay engaged in intramural athletics and football in year nine and cross-country track in year ten. From years ten through twelve he was actively engaged with the ski club, swimming team and audio-visual club, and was captain and president respectively of the latter two this year. This year he also joined the German Club, student patrol and and Leader's Club. He has also maintained membership in the Methodist Youth Fellowship, of which he is currently president. He states his attendance in all activities is regular.

Several teachers throughout his school career have noted Jay's "good ability" and his "improvement and need for more." In year eleven, in recommendations to the guidance office, all his teachers found Jay "likeable." Specific comments were "does not work consistently" from his math teacher; "does a good job" from his chemistry teacher; "has matured considerably from last year" and "could do better -- immature, but growing up" from his history and English teachers; and "not bad -- works more and more now" from his chemistry teacher.

Jay was a good subject for this evaluation. He has been under the phase program since its inception and apparently used it to meet his needs. It would appear he tended to choose below his ability level for easier educational demands until he needed to raise his phases to insure college entry. The interviewer has a definite feeling that Jay used the system as opposed to being molded by it. It would seem that Jay succeeded in achieving at his own pace at a level which allowed him to achieve his stated goals.

JAY

TABLE I

Term	Course														
	English III			Man Made World IV			El. Func. III			Physics IV			German III		
	*G	C	E												
1st	B			A			B			A			C		
2nd	B			A			B			A			B		
3rd	B			I			B			I			C		
4th															
Final	B			A			B			A			C		

* G: grade
C: conduct
E: effort

TABLE II

Methods of instruction in order of frequency

English III	Man Made World IV	Elementary Functions III	Physics IV	German III
Discussion	Audio Visual	Lecture	Lecture	Lecture
Lecture	Experience Projects	Problem Solving	Audio Visual	Discussion
Question & Answer	Problem Solving	Discussion	Problem Solving	Read & Recite
		General Comments		
O.K.	Good	O.K.	Good	O.K.

JAY

TABLE III

Test Name	Date	SS	%ile	Norms
Standford Binet	1/58	129	97 %ile	Nat'l
Otis QS Beta	9/62	120		
Otis QS Gamma	9/65	120		
DAT	9/63			
VR		29	90 %ile	
NA		19	75 %ile	
VR & NA		48		
Cl Sp & Acc		49	70 %ile	
SR		84	99 %ile	
AR		26	90 %ile	
MR		52	95 %ile	
Spell		0	5 %ile	
Sents		25	70 %ile	
PSAT	1966	V 39	73 %ile	"
		M 55	90 %ile	
CEEB	3/67	V 473		
		M 654		
Ach 1 M1	5/67	542		
	12/67	V 431		
		M 617		
Ach 1 En		402		
M 2		584		
Supp Ach GMLCT	2/68	423		

Class of 1968, Phase IV
12th year

ALICE

Alice is a very bright, poised, cooperative and happy person. Above all she is not afraid to express herself, her feelings about school, friends or her parents. She has red hair and possesses a genuinely warm smile.

Scholastically, Alice is a phase IV student. In the beginning of the year she was taking four phase IV subjects: English, physics, Modern European History and elementary functions. After a few weeks, she decided to change to phase V in Modern European History and elementary functions.

Because Alice's father was an officer in the Navy, the family is quite well traveled and in fact, have visited or lived in more than twenty-five states. Although both of her parents are sincerely interested in the phase program at Amherst Regional High, her father is especially interested in seeing Alice do well. Both parents are college graduates and her mother is a registered nurse at a local nursing home. Because Alice's father is a civil engineer as well as an ex-Navy officer, the family is placed in the second socio-economic category.

Alice has two brothers. Her older brother is in his first year of college and the younger brother is in the tenth year at Amherst Regional High. Her childhood included no unusual diseases. She appears in good health. Alice weighs 130 pounds and is five feet six inches tall.

Alice has a healthy and positive outlook on life. This attitude is especially prevalent when speaking about her friends. Alice believes that she derives much knowledge from discussions with her circle of friends. "The discussions I have with my friends are more valuable and inspiring than any of the classes I have."

Alice feels that she could learn a lot more outside of school. She said, "If I had my way I wouldn't attend high school because I can get more out of life by reading and especially by traveling." On the other hand, she believes that the phasing program is "valuable," but she maintains that "I don't know how I would go about improving it."

Her attitude towards her parents is undergoing a change. Alice said that "we don't go away together nor do we have good discussions as we used to in the past."

Finally, Alice knows she can accomplish the goals she sets for herself. She feels that she is "a part of (her) peer group." Her attitude towards herself is one of confidence.

Since this is Alice's last year in high school, the interviewer had to go into the files to see if Alice had followed the course plans she had initially set. The records indicate that she has slowly worked from all phase III and IV courses in her tenth year to one phase V and four phase IV courses in her eleventh year and finally this year's course program.

After high school Alice plans to attend college and in fact she has already been accepted to the college of her choice. Her occupational interests range from becoming the first woman astronaut to testing jet airplanes. As she herself says "I want to do the unusual."

The interviewer believes that Alice will have no difficulties carrying out her stated objectives or plans. She should have no trouble in her college career.

Her phase placement is the result of her own thinking and judgment. Although her parents, especially her father were aware of her phases, she contends that she "had complete freedom" in phase placement. Alice does admit that she sought advice from the counseling center but again, the final choice rested with her. Furthermore, Alice maintains that neither friends nor teachers had any real influence in her phase or curriculum plans.

Generally speaking her post high school plans are also a result of her own judgment. Alice said that "my vocational plans could not have been the result of someone's influence, except maybe television or science fiction novels."

The results of Alice's standardized tests provide further evidence of her ability. For both the Otis Beta and Gamma tests, Alice scored in the 99th percentile on the verbal and 96th percentile for the math section. Alice did extremely well on the SAT verbal with a score of 738, while she earned 563 on the math. These test scores support the probability of Alice's being successful in achieving her goals.

Alice's past grades include nothing below a B from the ninth year to the second term this year. As can be seen in Table I, Alice's grades for the current year have thus far been high. The third quarter brought a significant change in physics. She went from a B second term to a D. The three in effort indicates that she was not working, according to the teacher. In English too, both her conduct and effort were not as good as the two previous terms. Finally, she dropped her history course. Alice was not available for comment about these changes because she left school one month early in order to visit the college she had chosen.

Alice does not believe that it is important to be on the honor roll "because there is no inherent worth to it. It's nice to see your name on it, but it carries no significance in my mind."

Alice's favorite subject is modern problems "because the subject matter is interesting and the discussions are especially fruitful." On the other hand, physics is her least liked subject simply "because the concepts are difficult to grasp at times."

Alice has conducted no independent study. Generally speaking, she thinks that the evaluation procedures are "good" in English, elementary functions and modern problems but she feels that "the teachers in physics and modern European history are a little too easy in their marking."

Alice's reaction to the homework of her subjects was generally favorable: English, "I can see the need for it most of the time;" elementary functions, "There is a need for homework for it as an extension of class work, without reading it would be difficult to discuss and grasp the concepts;" modern problems, "It is a must if you're going to participate in class discussion;" history and physics, "provide homework that is of no great value."

As mentioned above, Alice changed phases twice at the beginning of the year. Both changes were the product of her judgment, but in each case the teacher was most influential. She states that the reason she changed in history was "because the phase IV was not challenging enough, while the phase V class could provide that challenge." In elementary functions she up phased from IV to V "because the instruction is about the same in both." She was happy with the results in the latter but found she did not have time to do the work in history. In both cases her parents knew and approved of the change.

Alice's extracurricular activities include the Goldbug (yearbook of which she is the editor) and Girl Scouts. With the Girl Scouts, she does much counseling. Alice does go on dates but only on special occasions such as the school prom. In her spare time she reads a great deal especially science fiction. She also watches television programs, mainly the science fiction type. Finally, she camps during the summer as well as doing part time work at the local library.

Teacher comments about Alice were concise. Most agreed that she is a hard worker, has a pleasant personality, is mature, quiet, polite and courteous. One teacher said "Alice is not only perceptive and well organized but she is always seeking out answers to questions." These remarks are realistic in light of her achievements.

Alice is a student who can benefit immensely from the ungraded program. The reason lies in the fact that she takes the initiative in seeking out answers to her problems and in directing her future. The program is ideal for her because Alice welcomes the responsibility for directing her own educational program. The phasing program has increased her initiative, judgment and sense of responsibility.

ALICE

TABLE I

Term	Course English IV			Physics IV			Modern Prob. V			Elementary Funct. V			Mod. Eur. Hist. V		
	*G	C	E												
1st	A	1	1	A	1	1	A	1	1	B	1	1	B+	1	1
2nd	B	1	1	B	1	1	A	1	1	B	1	1	A	1	1
3rd	B	2	2	D	1	3	B+	1	1	B	1	1	dropped subject		
4th	B	1	1	A	1	1									
Final	B			B			A			B					

* G: grade
C: conduct
E: effort

TABLE II

Methods of instruction in order of frequency

English ph IV	Physics ph IV	Elem Func V	Mod. Prob V	Mod. Eur. Hist. ph V
Discussion	Lecture	Lecture	Discussion	Discussion
Lecture	Audio Visual	Question & Answer	Group Research	Read & Recite
Question & Answer	Experience Projects	Problem Solving	Audio Visual	Lecture
		General Comments		
"Some purpose all of the time."	"The experience projects are interesting."	"In a course of this nature the conventional methods are most appropriate."	"Most valuable"	"Discussions are valuable."

TABLE III

ALICE

Test Name	Date	SS	%ile	Norms
Otis Beta	9/62	132	99 %ile	Nat'l
Otis Gamma	9/65	129	99 %ile	"
DAT overall	9/63		95 %ile	"
verbal reas	"		95 %ile	"
num abil	"		55 %ile	"
abst. reas	"		99 %ile	"
mech reas	"		97 %ile	"
cler sp. and acc	"		95 %ile	"
spelling	"		75 %ile	"
sentences	"		90 %ile	"
PSAT verbal	9/67	68	99 %ile	"
math	"	57	96 %ile	"
SAT verbal		738		"
math		563		"
achiev. English		688		"
ancient history		547		"
math I		572		"

Class of 1968, Phase IV FRED
12th year

Fred had a quiet air and an amiable smile. He participated willingly, responded freely, volunteered no information that was not specifically requested.

Fred is a 1968 graduate of Amherst, who has successfully followed a pre-college course for the past four years. He has participated at the phase IV level in the non-graded system since its inception. He maintained a grade of A the entire year in a phase III Latin course which he up-phased in midyear. In U.S. History in his eleventh year he earned a B at the phase V level. He appears to be an exceptionally good student, steadily earning A's and B's.

Fred's father is a high school graduate who owns and operates his own garage and an accompanying equipment sales franchise. His mother, also a high school graduate, is employed as a secretary. He is the youngest of three siblings. An older brother and an older sister graduated from a university and a commercial college, respectively.

There is no indication of any unusual health history in Fred's cumulative record. He appears to be quite healthy.

Fred's maturity was apparent in that he related easily with the interviewer in an adult manner. In the current vernacular, Fred would be described as "cool." Although responding readily to all questions, he remained as noncommital as possible, in part because he seemed unwilling to offend anyone. He has a varied extracurricular life.

Upon graduation from high school, Fred achieved his initial educational goal. He has been accepted by the University of Massachusetts, where he wants to earn a degree in landscape architecture to be followed by a master's degree in conventional architecture. This program has been recommended to him by a member of the architecture department at the University as the means of achieving his ultimate goal of becoming a city planner.

Fred's adherence to and confidence in his plans has been reinforced because of his high school success and his acceptance by the University.

Fred credited his teachers with giving him the most help in making his plans although his counselor had afforded him some vocational information. It would seem, however, that Fred has been his own greatest motivator. On his own initiative he inquired and received advice from University personnel.

The only test results in Fred's folder are dated 1962. They indicate an IQ of 130 and a 98+ percentile of national norms on the Iowa Test of Basic Skills. Excluding clerical speed and accuracy, his DAT percentiles were all exceptionally high.

Fred's school performance has consisted of mixed A's and B's. His conduct and effort are considered excellent. Since his admission to the University Fred has become bored with Amherst. He feels he's merely marking time now.

Fred missed the honor roll the third term of his senior year because of a C in English. He admitted that he might have been guilty of inadequate participation during the third term and his English teacher was known to lower marks for that reason. Fred's favorite subject is English because he enjoys literature and the teacher. He likes physics least, merely for lack of interest in the subject. When its relevance to architecture was pointed out, he conceded he might not particularly like the teacher.

Fred's grades have no discernible pattern of fluctuation. There has been a tendency in the last two years of high school for him to earn more B's than A's, which seems to indicate a slackening when success seems assured.

Fred engaged in no independent study this past year, because "it's extra work for extra credit, that I don't need any more." He said he had completed independent projects during his first three years of high school, however.

Fred consistently rated homework for all subjects over several marking periods as having "some value most of the time." Although homework is generally not graded he thinks it is necessary to effective class participation. He is aware his math teacher will raise the term grade if he knows the student has done his homework.

In a blasé manner, Fred rated his teachers and courses no better than "OK." This indifference may be a symptom of his "marking time" attitude.

Fred named five phase IV students as his closest friends. All were from the second socio-economic category and he had known them for several years at least. As part of school non-academic activities he sang in the District Chorus and was a Student Council member, president of the Pep Club, and a member of the yearbook staff. He enjoyed National Honor Society membership. Fred was not engaged in any sports activities and cited gym as the course he liked least.

There are several descriptive comments in Fred's record folder. A twelfth year teacher says Fred "should be as concerned over his own past performance as he is about being better than someone else." Another teacher comments that he "only does the essentials excellently." Again, he is described as a "very dependable worker," as "capable and conscientious." One teacher comments "Fred does very well without much effort, however, he settles for less." A final comment read "balances academic work with wide range of social interests."

Fred, a personable, obviously capable young man, would appear to have used the Amherst system most effectively in order to achieve a relatively meritorious record in secondary school. This record enabled him to achieve his second goal, admission to a university.

TABLE I

FRED

Term	Course														
	English IV			Elementary Funct. IV			Physics IV			French IV					
	*G	C	E												
1st	B			B			B			A					
2nd	B			B			A			B					
3rd	C			A			B			B					
4th															
Final	B			B			B			B					

* G: grade
C: conduct
E: effort

TABLE II

Methods of instruction in order of frequency

English IV	Elem. Func. IV	Physics IV	French IV	
Discussion Lecture Question & Answer	Discussion Lecture Question & Answer	Discussion Lecture Question & Answer	Discussion Read & Recite Question & Answer	
		General Comments		
O.K.	O.K	O.K	O.K.	

TABLE III

FRED

Test Name	Date	SS	%ile	Norms
Otis QS Beta	9/62	124 IQ		
Lorge Thorndike	1/62	130 IQ		
Iowa Basic	9/62	10.6	98.59	
DAT	9/63		90 %ile	
VR			97 %ile	
NA				
VR & NA			97 %ile	
AR			97 %ile	
SR			90 %ile	
MR			75 %ile	
Cl Sp & Acc			95 %ile	
Spell			97 %ile	
Sents				

Class of 1968, Phase IV, V KURT
12th year

Kurt's general appearance and manner give the impression that he is a serious student. He is a soft-spoken, articulate young man. He seems to have a wide vocabulary and appears to be well-informed on current events. His blond hair is combed over his forehead, in the current style, and he wears glasses.

Kurt, a senior, is in two phase IV and two phase V courses at the high school and is taking French at Amherst College. He is involved in a wide range of extracurricular activities, including sports, drama and student council, which have somewhat disrupted his studies this year. While he feels that he is capable of all A's and B's, he has received some C's this year.

Kurt's father is a professor at the University of Massachusetts. His mother is a homemaker. He has one older brother who is a junior at an Ivy League university.

Kurt is of average build, about five feet, ten inches tall and weighs 155 pounds. With glasses, Kurt's vision is corrected to 20/20. He does not appear to have any other physical handicaps. Kurt had all of the usual childhood diseases and has received all of the usual immunizations. During his elementary school years his teachers suspected that he suffered from a hearing difficulty. His first, second and third grade teachers commented that he never seemed to listen or follow directions. His parents commented that he never followed directions at home either. In records of his later elementary school years his mother is noted as having said that both Kurt's older brother and his father were absent-minded, and she assumed that Kurt's not following directions was a family characteristic. No hearing defect was discovered.

While Kurt indicated that he has enjoyed the broad educational experiences he has had at Amherst High School, he said that during the past year he has felt rather out of place and that his interests seem to be somewhat different from most of the students. He seemed to feel that many students were only interested in marks they received and that marks were not always an indication of real learning.

Although Kurt seems to be popular, he said that he didn't have many close friends because he did not find his peers to be, generally, intellectually stimulating. He is looking forward to college, where he anticipates finding more academically inclined companions.

Kurt has taken an academically oriented program throughout high school. All of his courses have been either phase IV or V. Last summer he took chemistry at Cornell University. He is planning to attend a small Ivy League college next year.

Although Kurt expressed an interest in the humanities, he is not sure what his college major will be. He does not have any definite vocational plans at present. However, he does appear to be confident that whatever his choice, he will be successful.

Kurt

Kurt indicated that his family, friends, teachers, and guidance counselor all have encouraged his academic pursuits. He feels, however, that he has done his own planning and made his own decisions concerning courses, phases and college.

Kurt's test performance is well above average and it would seem that his confidence in his ability is well founded when compared to test results. Two of Kurt's marks this year have been lower than one might expect from his test performance and his previous school record. Kurt has never, before this year, had any C's in academic subjects. His expressed discontent and boredom with school this year and his involvement with a number of extracurricular activities may account for his performance.

Kurt, who has not made the honor roll on three occasions this year, seems to feel that the honor roll is important for lower phase students who don't get much recognition. He, however, says he is not particularly concerned about the honor roll. He stated that he is more concerned about what he is learning in a course.

Kurt seems to enjoy most of his classes and the variety of methods used for instruction. In the one class he dislikes, he feels it is the teacher rather than the method of instruction to which he objects. See Table II.

Kurt has not become involved greatly with any kind of independent study. He indicated that without an opportunity to discuss his ideas he either loses interest or does not remember whatever it is that he had found thought-provoking. He, therefore, prefers to work with groups. He feels that he learns more this way.

Kurt believes that the marking system is more than fair. He feels that at least so far as his mark in effort is concerned, he should have not received all "ones". He admits not working as hard as he could in his subjects. Kurt thinks that marks are important, but he does not think that a student should devote himself to simply getting good grades. Kurt seems generally more concerned with ability than with performance and is sometimes satisfied with knowing he can do something rather than actually doing it.

Kurt is usually conscientious about doing his homework regularly, and he feels that homework is a valuable learning experience most of the time. He stated, however, that textbook reading was sometimes repetitious of classroom work.

Kurt has made his own decision about what courses to take and what phase levels to choose. Both his parents and his guidance counselor seem to feel that his choices have been appropriate.

This year, Kurt down phased in English (phase V to IV) because there was too much independent work and not enough discussion in the higher phase. Although he is receiving better marks, he is not entirely satisfied with the change because the new class has not been thought-provoking in its discussions. Kurt said that he was usually bored with the class and that the difference in ability level between phase IV and V English was too large.

As indicated previously, Kurt is involved in a number of extracurricular activities. He is in the school chorus, he has been in several dramatic productions at school, he is vice president of the debate club, vice president of student government, president of the French club, an active member of the ski club, and participant on the track team.

One of Kurt's favorite extracurricular activities has been the debate team. During the winter months the team traveled extensively throughout the state. Kurt seemed to enjoy the traveling and would become quite excited when the team won a tournament. Kurt came to one interview quite depressed because the team had not performed as well as he would have liked. It seemed that he was often much more involved with his out-of-school activities than with academic interests per se.

Although Kurt has many acquaintances and seems to be well liked, he feels that there are only two or three people he can really call friends. These people are at the same socio-economic and phase level as Kurt.

His teachers describe him as a mild mannered, competitive student who is serious, sharp, reserved and yet critical about his work. One teacher said that Kurt gives of himself while he thoroughly enjoys all that is life about him.

There seems to be some inconsistency between the feelings Kurt expresses and his overt behavior. Kurt says that he finds class discussion more stimulating than independent study, yet he feels that most of the students at Amherst High School are not intellectually stimulating for him. He says that he feels somewhat out of place, yet he seems to be well liked by other students, and he certainly has been involved with the school and its activities. He claims to be interested in learning, yet admits that he has not put a great deal of effort into his studies this year. He has, it seems, actually been more devoted to extracurricular activities than to academic activities.

One may speculate that Kurt has not been challenged this year or that he is more mature than his peers and was perhaps ready to attend college this year rather than spending his time at Amherst High School. Kurt did express the feeling that his French class at Amherst College was one of his best liked classes, because the students were more mature and more serious about school.

When Kurt goes to college he may find that not all students are as serious about academic matters or as mature as he imagines; this may be somewhat disillusioning for him.

Although Kurt has had some difficulty this year, generally, the ungraded program has given him the freedom of choice he seems to enjoy. He has had the opportunity to accelerate in those subjects areas he feels comfortable with and take a somewhat less strenuous path in other subjects which he does not enjoy.

KURT

TABLE I

Term	Course														
	English Phase IV			History Phase IV			Physics Phase V			Calculus Phase V			French Amherst Col.		
	*G	C	E												
1st	C	1	1	A-	1	1	B-	1	1	C	1	1			
2nd	B	1	1	A	1	1	B	1	1	B	1	1			
3rd	B	1	1	A	1	1	B-	1	1	C	1	1			
4th															
Final	B			A						B			85%		

* G: grade
C: conduct
E: effort

TABLE II

Methods of instruction in order of frequency

English ph IV	Math ph V	Physics ph V	French Amherst Col	History ph IV
Discussion	Question & Answer	Experiments	Discussion	Question & Answer
Question & Answer	Lecture	Lecture	Question & Answer	Discussion
	Discussion	Discussion	Read & Recite	Lecture
General Comments				
Likes discussion, but not in this class, because it is not really thought-provoking for him.	Sometimes he finds that he is bored.	Enjoys lab.	Enjoyed course; felt that college students were more serious about their studies.	Felt that there was a proper balance between methods used in classroom instruction.

TABLE III

KURT

Test Name	Date	SS	%ile	Norms
SRA	1/59	147		Nat'l
Lorge Thorndike	3/62	133		"
Otis QS	9/62	121		"
	9/65	130		"
National Merit	3/67		91 %ile	"
Ceeb SAT verbal	1/67	724		"
math	"	663		"
verbal	1/68	665		"
math	"	607		"
DAT verbal	9/63		99 %ile	
num	"		86 %ile	"
abst	"		86 %ile	"
spelling	"		95 %ile	"
mechanical	"		90 %ile	"
clerical	"		66 %ile	"
spatial	"		98 %ile	"
sentence	"		90 %ile	"